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ANNUAL

REPORT

JULY 1, 1993
TO
JUNE 30, 1994

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THE

MISSOURI HIGHWAY

AND TRANSPORTATION

DEPARTMENT

THE COMMISSION

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THE COMMISSION

The Missouri Highway and Transportation Commission is a six-member, bipartisan governing body for the Missouri Highway and Transportation Department. The governor with the Senate's consent appoints members to staggered, six-year terms on the commission. No more than three commissioners may be of the same political party.

The commission appoints the chief engineer, chief counsel and commission secretary. The chief engineer with commission approval appoints all other appointments.

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSIONERS AT THE END OF FISCAL YEAR 1994

THOMAS M. BOLAND
Chairman

JOHN L. OLIVER JR.
Vice Chairman

CAROL L. WILLIAMSON
Member

THOMAS JOHN BARKLAGE
Member

JAMES W. GAMBLE
Member

ROBERT E. JONES
Member

THE STAFF

MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT OFFICIALS AT THE END OF FISCAL YEAR 1994

WAYNE MURI
Chief Engineer

PAUL TAYLOR
Assistant Chief Engineer

FRANK CARROLL
Assistant to the Chief Engineer

JOE MICKES
Assistant to the Chief Engineer

DAVE DEWITT
Assistant to the Chief Engineer

RICH TIEMEYER
Chief Counsel

MARI ANN WINTERS
Commission Secretary

TERRY PORTERFIELD
Audit and Business
Analysis Director

AL LAFFOON
Bridge Engineer

GARY CHULLINO
Construction Engineer

BOB SFREDDO
Design Engineer

CLAY WESTER
Equipment and Procurement Director

RICH MILLARD
Human Resources Director

C.F. BARNES
Fiscal Services Director

LEW DAVISON
Information Systems Director

JIM JACKSON
Maintenance and Traffic
Division Engineer

BILL TRIMM
Materials and Research
Division Engineer

DAVE SNIDER
Planning Division Engineer

SUE MUCK
Public Affairs Director

ART TAYLOR
Right of Way Director

MEL SUNDERMEYER
Transportation Director

THE DISTRICTS AND DISTRICT STAFF

DISTRICT 1

Northwest Area
3602 N. Belt Highway
P.O. Box 287
St. Joseph, Mo. 64502
(816) 387-2350

DISTRICT 2

North Central Area
U.S. Route 63
P.O. Box 8
Macon, Mo. 63552
(816) 385-3176

DISTRICT 3

Northeast Area
Highway 61 South
P.O. Box 1067
Hannibal, Mo. 63401
(314) 248-2490

District 4

Kansas City Area
5117 East 31st Street
Kansas City, Mo. 64128
(816) 889-3350

District 5

Central Area
1511 Missouri Blvd.
P.O. Box 718
Jefferson City, Mo. 65102
(314) 751-3322

DISTRICT 6

St. Louis Area
1590 Woodlake Drive
Chesterfield, Mo. 63017
(314) 340-4100

DISTRICT 7

Southwest Area
3901 E. 32nd Street
P.O. Box 1445
Joplin, Mo. 64802
(417) 629-3300

DISTRICT 8

Springfield Area
3025 East Kearney
M.O. Box 868
Springfield, Mo. 65801
(417) 895-7600

DISTRICT 9

South Central Area
U.S. Business Route 63 North
P.O. Box 220
Willow Springs, Mo. 65793
(417) 469-3134

DISTRICT 10

Southeast Area
P.O. Box 160
Sikeston, Mo. 63801
(314) 472-5333

MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT DISTRICT ENGINEERS AT THE END OF FISCAL YEAR 1994

GARRY CHEGWIDDEN

Northwest Area
District Engineer

KEN FRYER

North Central Area
District Engineer

DICK JONES

Northeast Area
District Engineer

DAN MILLER

Kansas City Area
District Engineer

JIM TOFT

Central Area
District Engineer

J.T. YARNELL

St. Louis Area
District Engineer

KEN STALCUP

Southwest Area
District Engineer

WILLIS GRAVEN

Springfield Area
District Engineer

ROYCE FUGATE

South Central Area
District Engineer

FREEMAN

MCCULLAH
Southeast Area
District Engineer



THE

MHTD

DISTRICTS

1994
ANNUAL
REPORT



**THE NORTHWEST
AREA DISTRICT,
HEADQUARTERED
IN ST. JOSEPH**

District 1 consists of 12 counties in northwest Missouri. The district office is in St. Joseph. There are about 445 employees working in eight departments.

The Maintenance and Traffic Department is divided into 10 areas, which are comprised of 32 subareas across the district. These subareas normally perform routine maintenance work and specialized work such as replacing cross-road pipes and repairing bridge decks. However, this type of work was limited because of the flood of 1993. During July and August 1993, the flood created extensive damage to the highway system. Interstate 29 was closed five different times; one of which lasted five days. U.S. 36 was closed once, and at one time during the flood, there were 86 routes closed due to high water. More than 250 locations were assessed as damage sites. These sites were repaired at a cost of more than \$18 million.

District 1 has three resident engineer offices. They are located in Maryville, St. Joseph and Cameron. Major construction projects included the following.

- Interstate 35, Clinton County — expand rest area

- Interstate 29, Buchanan County — bridge widening and resurfacing

- Route 169, Andrew County — bridge replacement

- Interstate 29, Andrew-Holt counties — bridge rehabilitation and resurfacing

- Route 6, Buchanan County — widening, resurfacing and traffic signals

- Route 169 Buchanan County — widening and resurfacing

- Route 371, Buchanan County — widening and resurfacing

- Route 36, Buchanan-Dekalb counties — pavement repair, resurfacing

- Route 69, Clinton County — bridge replacements

- Route 36, Caldwell County — grading, bridges for dual lane

- Interstate 35, Daviess County — bridge rehabilitation

- Route 69, Harrison County — bridge replacement

- Route 71, Nodaway County — paving

- Route V, Nodaway County — paving, relocation

There were 19 projects awarded in District 1 totaling \$20,035,900 in construction costs. In addition, 10 county road bridges with bids totaling \$3,003,856 were let under the Off System Program monitored by the district liaison engineer.

The Design Department has four design squads and one survey party who develop design plans for upcoming projects. Other design responsibilities include liaison between counties and MHTD, coordination of utility work with contract projects, dissemination of information to the public on upcoming projects, and operation and maintenance of the district computer systems.

The Equipment and Procurement Department maintains the district's equipment, which includes passenger cars, pickups, trucks (mainly dump trucks) and off-road equipment. This fleet equals an investment of approximately \$14 million. The district's operating costs for the 12-county area are approximately \$3 million annually.

The Materials and Research Department samples and tests all materials used in the maintenance and construction of roadways. This work determines compliance with the department's specifications and insures only high-quality products are used. Materials and Research personnel have additional various areas of responsibility that include the following:

- *designing and monitoring Portland cement concrete and asphaltic concrete mixtures;
- *sub-surface investigations required for highway and bridge design;
- *investigating and monitoring the performance of new materials and/or products for use in the department; and
- *sampling and testing as required by the Federal Highway Administration (FHWA).

The Right of Way Department has five employees. This department acquires right of way for projects, maintenance lots or other department construction projects. It also handles the sale of excess property for the district. During the fiscal year, the Right of Way Department purchased 29 parcels of real estate totaling \$80,405.

The Human Resource Department is involved in recruiting, hiring, Equal Employment Opportunity, training and development, interpreting policy, career planning, compensation, benefits, employee assistance plan, employee /supervisory counseling, complaint/grievance procedures, drug testing and physicals, Americans With Disabilities Act and temporary modified duty.

The Fiscal Services Department's duties include payroll, time sheets, overdimension permits, inventories and processing commercial invoices. Fiscal Services personnel handle processing incoming and outgoing mail, personnel matters, insurance, maintenance of the district office and garage, the writing of the district report for the *MHTD News*, appointments, typing, phone calls, expense and overtime checks and salary checks. The District 1 Credit Union, workers' compensation claims, insurance and retirement matters are also this department's responsibilities.

District 1 conducts cardiopulmonary resuscitation/first-aid classes and commercial drivers' training for employees. Service award dinners are held each year for employees, and pre-retirement seminars are held every two years.

District 1 has had 18 employees selected as department Employee of the Month award-winners.

The district also has many activities such as the annual Employees' Association softball tournament to raise money for a needy family at Christmas, bowling tournaments and steak dinners for employees who are retiring.

**THE NORTH
CENTRAL AREA
DISTRICT,
HEADQUARTERED
IN MACON**

District 2 oversees highway activities in north central Missouri. The 14 counties of District 2 are Adair, Carroll, Chariton, Grundy, Howard, Linn, Livingston, Macon, Mercer, Putnam, Randolph, Saline, Schuyler and Sullivan. These 14 counties contain more than 8,000 square miles. Within this 8,000 square miles are 3,746 miles of highway — 24 miles of interstate, 733 miles of primary and 2,989 miles of supplementary roads.

Eleven maintenance areas with 32 buildings maintain this large road system. In addition, there are five special crews in two locations to handle tasks such as signing, striping and bridge and pavement repair. District 2 has 298 maintenance employees.

The Design Department has 33 employees, which are headquartered at the district office in Macon. The district office also has the Right of Way Department with 10 employees, the Fiscal Services Department with 12 employees and the Equipment and Procurement Department with 30 employees, which includes 15 field mechanics assigned to the district's maintenance buildings.

The Human Resources Department has two people. This department is responsible for employment, training, employee relations, policy interpretation, internal advancement and Equal Employment Opportunity.

Of the 12 District 2 Materials and Research Department employees, two are at Marshall. Their main duty is to inspect prestressed bridge beams at the Quinn prestress plant. They also make sure the beams are built according to department plans and specifications.

Three resident engineers working from four offices manage the district's construction work. Major construction projects include the following:

- *replacement of the Missouri River bridge at Boonville;
- *construction of a diamond interchange on U.S. Route 36 at Bevier;
- *resurfacing, shouldering, bridge rehabilitation and culvert extensions on Route 65, Saline County, north and south of Marshall, and Route 65, Lafayette County at Waverly;
- *resurfacing Interstate 70, Saline County (eastbound lane) from Route 65 east to Cooper County; and
- *many smaller bridge and resurfacing jobs.

There are 44 construction employees. In all, District 2 has 442 employees.

The North Central District was pleased to be selected as a pilot for the STOP Safety program. The program objective is to reinforce safe work practices in an environment conducive to eliminating injuries in the workplace by focusing on and correcting unsafe acts.

The great flood of 1993 provided a gargantuan task for District 2. At one period during the flooding, nearly 50 roads, nine of which were major routes, were closed, and more than \$15,000,000 federally reimbursed funds were used to repair the extensive flood damage. In all, approximately 25 contracts were let. This was truly a team effort and a job well-done for District 2 employees who not only handled the flood damage quickly, but also managed to accomplish their normal duties.

District 2 has an active and proud history of dedicated and involved employees committed to the betterment of the department through quality improvement.

District 3, headquartered at Hannibal, encompasses the area of Audrain, Clark, Knox, Lewis, Lincoln, Marion, Monroe, Montgomery, Pike, Ralls, Scotland, Shelby and Warren counties. Within its jurisdiction, District 3 has 3,371 miles of highways. In all, 415 people work at the Hannibal district. The district has 10 subareas, 38 maintenance buildings and two resident engineer offices at Hannibal and Mexico.

The district's construction projects include the following:

Route 79, Pike County, \$1,059,307 -- grading, drainage, box culvert and asphalt pavement 1.6 miles north of Route H and north of Annada; 1.1 miles; 60 percent complete.

Route J, Ralls County, \$584,250 -- grading, drainage, asphalt pavement and upgrade of railroad track circuitry 0.4 miles south of Route 36; 0.4 miles; completed July 14, 1993.

Route 24, Marion County, \$4,919,215 -- grading, drainage, concrete pavement and new bridge over the railroad tracts 0.1 miles west of Mississippi River at West Quincy; 1.4 miles; 23 percent complete.

Route 79, Pike County, \$673,653 -- grading, drainage, box culvert and asphalt pavement 2.5 miles south of Route W south of Clarksville; 0.7 miles; 23 percent complete.

Route J, Ralls County, \$4,439,966 -- grading, drainage, asphalt pavement from 1.5 miles north of Route BB to Route 154 in Perry; 5.1 miles; 29 percent complete.

Route 36, Marion County, \$2,057,505 -- grading, drainage, concrete pavement and bridge replacement over the railroad tracks 1.0 mile west of Route U west of Hannibal; 0.8 miles; 42 percent complete.

Route 54, Audrain County, \$2,785,295 -- subgrading, shouldering, guard rail and concrete pavement for Mexico bypass; 4.7 miles; 23 percent complete.

Route 54, Audrain County, \$6,904,190 -- grading, drainage and bridges for the Mexico bypass (paving not included); 4.7 miles; completed Aug. 11, 1993.

Route 61, Clark County, \$2,940,610 -- bridge replacement, grading, drainage and asphalt pavement at Fox River and one mile west of Route 136; 1.3 miles; 85 percent complete.

Route 61, Clark County, \$770,363 -- grading, drainage and asphalt pavement 0.1 miles south of the Iowa state line south 0.3 miles; 0.2 miles; 56 percent complete.

Route 61, Clark County, \$164,689 -- asphalt resurfacing 0.4 miles south of the Iowa state line south to 0.3 miles north of Route 136; 1.6 miles; 75 percent complete.

Route 61, Clark County, \$529,113 -- pavement repairs and asphalt resurfacing from 0.3 miles north of Route 136 east to 0.9 miles east of Route 136 Spur; 5.2 miles; 67 percent complete.

Route 136 Spur, Clark County, \$284,325 -- asphalt resurfacing from Route 136 (Wayland) south to Route 61; 2.1 miles; 0 percent complete.

Route 61, Clark/Lewis counties, \$925,138 -- asphalt resurfacing from Route 136 Spur south to Route B north junction, Lewis County; 10.9 miles; 0 percent complete.

Route 15, Knox County, \$1,104,330 -- grading, drainage, replace

*THE NORTHEAST
AREA DISTRICT,
HEADQUARTERED
IN HANNIBAL*

railroad overpass and asphalt pavement from 0.3 miles south of Route 11 south to 2.5 miles west of Route ee; 0.7 miles; 33 percent complete.

Route 36, Marion County, \$1,962,291 -- grading, drainage, two bridges, fencing and concrete pavement 0.6 miles east of Route 61 (Central Avenue, Hannibal); 0.1 miles; 14 percent complete.

Route 36, Marion County, \$559,068 — cold milling, concrete pavement repairs and asphalt resurfacing from Shelby County line east; 4.6 miles; 40 percent complete.

Route 36, Marion County, \$239,963 — pavement repairs and asphalt resurfacing from Route N east (Hannibal); 0.6 miles; 41 percent complete.

Route 61, Marion County, \$738,991 — cold milling, non-reinforced concrete pavement and asphalt resurfacing from Route 168 south to 0.1 miles north of Ralls County line; 1.7 miles; 40 percent complete.

Route 54, Audrain County, \$902,648 — bridge rehabilitation and asphalt resurfacing from Boulevard Street in Mexico south to Callaway County line; 6.2 miles; 80 percent complete.

Route A, Monroe County, \$383,232 — grading, drainage, bridge replacement, guardrail and asphalt pavement 0.5 miles south of Route WW (Crooked Creek); 0.1 miles; 95 percent complete.

Interstate 70, Montgomery County, \$1,191,030 — cold milling, pavement repairs and asphalt resurfacing of westbound lane from 0.6 miles west of Route F in High Hill east to Warren County line; 7.2 miles; 30 percent complete.

Route 54, Pike County, \$651,344 — widening and asphalt resurfacing from 0.1 miles east of Route 154 east to Route U; 6.0 miles; 94 percent complete.

Route 19, Ralls/Audrain counties, \$1,853,210 — asphalt resurfacing from Route 154 north junction south to Route 54 north junction; 10.5 miles; 0 percent complete.

Route 19, Montgomery County, \$1,808,175 — grading, drainage, two bridges and asphalt pavement from 0.3 miles south of Route J (Mill Creek) and 0.4 miles south of Route Y (Bear Creek); 0.6 miles; 50 percent complete.

Route 61, Lincoln County, \$342,695 — grading, drainage, high-type shoulders, placement and compaction of embankment under existing bridges and the installation of highway lighting on Route 61 from Route C south; 0.3 miles; completed Nov. 16, 1993.

Route 79, Lincoln County, \$1,542,190 — pavement repairs and asphalt resurfacing from Pike County line south to 1.0 mile north of Route C; 3.4 miles; 19.8 miles; 80 percent complete.

Route 154, Monroe County, \$252,765 — pavement repairs and asphalt resurfacing from Route 24 east to Route 15 in Paris; 1.9 miles; completed Sept. 20, 1993.

Route 36, Shelby County, \$268,887 — pavement repairs and asphalt resurfacing from Route 36 west junction to Route 36 east junction in Shelbyville; 1.7 miles; completed Oct. 26, 1993.

Route M, Shelby County, \$342,815 — asphalt resurfacing from Route H east to Route 15; 9.3 miles; completed May 12, 1994.

Route 19, Ralls/Audrain counties, \$240,541 — slurry seal from Route 154 north junction south to routes 54 and J; 10.5 miles; completed Oct. 13, 1993.

Route 47, Lincoln County, \$394,355 — aggregate shoulders from 0.9 miles east of Route 61 at Troy east to Route 79 at Winfield; 12.4 miles; completed Oct. 6, 1993.

Route KK, Lincoln County, \$326,623 — asphalt resurfacing from Route 61 south junction north; 3.1 miles; completed July 30, 1993.

Route 61, Lincoln County, \$79,387 — asphalt resurfacing from Route 61 north junction to Route KK; 0.9 miles; completed July 30, 1993.

The District 3 Materials and Research Department is responsible for the inspection of material from 37 quarries, 11 sand producers, two mineral-filler producer, three cement plants and two asphalt cement terminals. In 1994, 1,435,292 tons of aggregate, 53,888 tons of cement and 2,604,180 tons of asphalt were inspected.

Inspection was also provided at five precast facilities and one prestress/precast plants where temporary barrier curbs, drop inlets, manholes, reinforced concrete pipes, earth panels, prestressed bridge girders, deck panels and box culverts are produced.

A total of 1,012 identification numbers were assigned in fiscal year 1994. This includes general material samples submitted to MHTD's Central Laboratory for further testing, trial mix material and material reports. Soil survey reports were completed for seven construction projects. Also the district soil and geology technologist performed five slide investigations.

District 3's territory has some unique features. For example, in District 3 the scenic Great River Road follows Route 79 from Hannibal to Old Monroe, and the Lewis and Clark Trail follows Route 94 in Warren and Montgomery counties. The Mark Twain Lake and Clarence Cannon Dam are major recreational attractions in District 3.

As of June 30, 1994, District 3 had 417 groups enrolled in Missouri's Adopt-A-Highway program.

*THE KANSAS
CITY AREA
DISTRICT,
HEADQUARTERED
IN KANSAS CITY*

District 4 oversees the highway and transportation system for west central Missouri. It is headquartered in Kansas City at 5117 East 31st Street.

The district is made up of eight counties: Cass, Clay, Henry, Jackson, Johnson, Lafayette, Platte and Ray. The district has 36 administrative personnel, 107 construction personnel, 85 design employees, 33 equipment and procurement employees, nine legal employees, 407 maintenance and traffic personnel, 29 materials and research employees, two human resources employees, two employees from risk management, one planning employee and 18 right of way employees. In all there are 729 District 4 employees.

The Maintenance and Traffic Department maintains 2,733 miles — 202 miles of interstate, 569 miles of primary and 1,696 miles of supplementary roads and 265 miles of outer roads. There are 34 maintenance buildings under the supervision of nine area supervisors and six special crew buildings under the supervision of nine special maintenance supervisors.

Maintenance and Traffic administered a total of 78 Adopt-A-Highway permits. The Maintenance and Traffic Department started a new program in January 1993 called the Motorist Assist Program. It has been very successful. An old resident engineer's office was remodeled to house the Motorist Assist crew.

The Construction Department has seven resident engineer offices. The major project under way is the Bruce R. Watkins Drive. The project's estimated cost is \$200 million; it is scheduled to be completed in 2002. The project's total length is 10 miles.


The Design Department has eight squads preparing plans for roadways. This department also prepares all agreements and administers various programs with county and city governments. District 4's Design Department is working with the city of Kansas City to develop a special project at the Bruce R. Watkins Drive (formerly known as the South Midtown Roadway). There will be extensive landscaping and aesthetically enhanced bridges. This is a good example of what city/state cooperation can achieve.

Since the federal government's passage of the Intermodal Surface Transportation and Efficiency Act of 1991, the district's Planning Department has worked closely with the local metropolitan planning organization so that we can better coordinate MHTD activities within the Kansas City metropolitan area. Planning also leads the district programming team in the annual development of the district's right of way and construction program.

Right of way valued at nearly \$3,377,465 was acquired during the fiscal year, and relocation benefits amounting to \$100,086 were paid to parties affected by district projects.

The Materials and Research Department staff inspects materials used in the district's construction and maintenance programs to assure that quality materials are used. Inspection of materials for other districts is also provided.

The District Counsel's Office is comprised of a district counsel, a



senior assistant counsel, two assistant counsels, one paralegal and three legal secretaries. The office is responsible for preparing, filing and defending cases on behalf of the Highway and Transportation Commission in the 20 county circuit courts in districts 4 and 1.

The District Counsel's Office manages approximately 160 court cases each fiscal year. The types of cases handled by the office include condemnation, workers' compensation, general liability, fleet vehicle liability, property damage, inverse condemnation and various miscellaneous cases. During the 1994 fiscal year, the district counsel and assistant counsels argued five appeals; wrote four briefs; handled three inverse condemnation cases and six miscellaneous cases; filed five condemnation petitions for a total of 37 tracts; settled six workers' compensation cases, one inverse condemnation case, one general liability case and one fleet vehicle liability case; and tried eight condemnation cases and three general liability/fleet vehicle liability cases in addition to working on their other files established before the fiscal year.

The district's Human Resources Department provides primary staff and generalist support for more than 700 district personnel. This support includes counseling, staffing, policy interpretation, equal employment opportunity and affirmative action monitoring, controlled substance testing, career counseling, training and others.

The district has 750 pieces of equipment that are maintained by 17 field, five shop mechanics and two mechanic helpers.

The Personnel and Fiscal Services departments offer support services for the district.

District 4's American Red Cross Standard First-Aid Program trained or recertified 250 employees in the skills of first aid and adult CPR.

Service awards honored 111 employees with 1,970 total years of service.

*THE MID-
MISSOURI AREA
DISTRICT,
HEADQUARTERED
IN JEFFERSON
CITY*

District 5 has eight departments including fiscal services, legal, equipment and procurement, maintenance and traffic, construction, design, right of way and materials and research. The district has approximately 515 employees. There are 11 maintenance areas, 43 sub-area buildings, six special crews and four construction project offices.

The district covers a land area of 7,787 square miles and encompasses the 13 counties of Benton, Boone, Callaway, Cole, Camden, Cooper, Gasconade, Maries, Miller, Moniteau, Morgan, Osage and Pettis including the Lake of the Ozarks area and the cities of Sedalia, Columbia and Jefferson City. The district oversees 78 interstate miles, 819 miles of primary system highways and 2,558 miles of supplementary system roads.

The major construction projects in District 5 are as follows:

Route 65, Benton County -- pavement repair and resurfacing with asphaltic concrete from Route H south of Lincoln to 2.2 miles south of Route T; 6.6 miles.

Interstate 70, Boone County -- construct new interchange at Route 63 in Columbia.

Route 63, Boone County -- add a lane for dual pavement; Route 124 North junction to Wagon Trail Road; 7.8 miles.

Route WW, Boone County -- replace two box culverts along with two sections of pavement east of Columbia.

Interstate 70, Boone County -- 24-foot asphaltic concrete resurfacing of westbound lane from Route 63 in Columbia to 1.8 miles west of Route Z.

Route 54, Callaway County -- adding a lane for dual pavement; Route 54 Business Junction north of Fulton to 0.6 miles north of Route OO; 18.8 miles.

Interstate 70, Callaway County -- 24-foot asphaltic concrete resurfacing of westbound lane, one mile east of Route JJ to 0.5 miles west of Route D.

Route 63, Callaway County -- Raise and pave the southbound lanes from 0.2 mile south of Katy Trail overpass to 0.3 miles north of Turkey Creek; 2.1 miles.

Route 54, Camden County -- Grand Glaize bridge; removal of existing 1930 bridge and construction of six main bridge piers.

Route 7, Camden County -- bridge replacement over Dry Auglaize Creek.

Route 54, Camden County -- continue widening to five lanes west of Route KK to east of Grand Glaize bridge.

Route 179, Cole County -- bridge replacements over Meadow Creek and Small Creek.

Route 50, Cole County -- 24-foot asphaltic concrete resurfacing from Moniteau County line to 1.6 miles west of routes D and T.

Route C, Cole County -- 24-foot asphaltic concrete relocation between Russellville and west of Route D.

Interstate 70, Boone-Cooper counties -- replace bridge deck and repaint the Missouri River bridge at Rocheport.

Route 50, Osage-Gasconade counties -- 24-foot asphaltic concrete resurfacing 0.4 miles east of Route 89 to 0.3 miles west of routes A and

BB Junction at the Gasconade River; 12.3 miles.

Route 100, Gasconade County -- rock removal and 24-foot plant mix bituminous pavement, 0.6 miles east of Route 19 at Hermann; 0.3 miles.

Route 100, Gasconade County -- raise the grade and relocate to alleviate flooding 0.5 miles west of Route 19 in Hermann.

Route 42, Maries-Miller counties -- bridge replacements over Tavern and Little Tavern creeks.

Route 50, Moniteau County -- 24-foot asphaltic concrete resurfacing from 0.4 miles east of Route 87 to Cole County line.

Route 5, Morgan County -- bridge replacement over Straight Fork of Moreau Creek.

Route J, Morgan County -- replace low water crossing with new bridge over Brushy Creek.

Route P, Osage County -- bridge replacement and relocation at Maries River.

Route Y, Pettis County -- install storm sewers along with beautification near the main entrance to the State Fairgrounds in Sedalia.

As of June 30, 1994, District 5's Adopt-A-Highway program had 647 adoptions with more than 1,024 miles adopted in the district's 13 counties.

DISTRICT 6

District 6, headquartered in Chesterfield, has approximately 850 employees working in 11 departments including fiscal services, district counsel, equipment and procurement, maintenance and traffic, construction, materials and research, design, right of way, planning, public affairs and human resources. It includes St. Louis city and the counties of St. Louis, St. Charles, Franklin and Jefferson.

The district's mission statement reads, "Our mission is to provide the St. Louis metro area with a quality transportation network meeting today's demands and tomorrow's expectations." With the introduction of the total quality management philosophy into the department, the district has found many new ways to work together effectively and efficiently. Many employees are involved in the process as trainers, facilitators and team members. In June 1994, the district completed the task of training all its employees in the quality improvement process.

The district also has been working to improve its external relationships. Many department employees have spent hours speaking with high school students, area businesses, governmental agencies and service organizations in the metropolitan area. Numerous public meetings were held. The district also works very closely with the metropolitan planning organization, East-West Gateway Coordinating Council, to plan for the best transportation system for St. Louis.

Fiscal year 1994 was an unforgettable year because of the record floods

*THE ST. LOUIS
AREA DISTRICT,
HEADQUARTERED
IN ST. LOUIS*

in Missouri. District 6 was not left out of this historic event. Roads were closed off and on from late fiscal '93 through the third month of fiscal '94. During one of our hardest times of the flood, we lost an employee. On the night of July 31, 1993, the Monarch levee in Chesterfield broke, and Route 40/61 was flooded. Early on the morning of Aug. 1, 1993, Maintenance Worker Jon Wade Smith was changing the message on a sign on Interstate 270 to notify motorists that Route 40 was closed. He was struck and killed by a motorist. His dedication and devotion above and beyond the call of duty reflect the exemplary efforts put forth by MHTD employees during the record floods.

More than half the employees in District 6 were directly involved with fighting this great flood.

District 6 is responsible for maintaining 1,458 miles of roadway. The maintenance and traffic department includes 24 maintenance buildings supervised by nine area supervisors. An additional eight supervisors oversee operations such as signals, lighting, striping, signing, bridge, landscape and special repairs. District 6 maintenance and traffic employees are responsible for 683 signal installations, which is about 50 percent of the statewide total.

The department also oversees the Adopt-A-Highway program. As of June 30, 1994, 776 groups had enrolled in the program. The district, with its three landscape crews, has received many compliments on recent efforts to enhance area landscaping.

The Motorist Assist program continued to increase the number of stranded motorists being assisted in its second year. The program, which began in February 1993, helps stranded motorists on the area highways and helps prevent these incidents from causing traffic tie-ups. The program operates 16 hours per day, five days a week. Through June 30, 1994, Motorist Assist drivers had helped 8,526 motorists.

The Construction Department has nine project offices staffed by approximately 160 engineers and technicians. During the past year, this District 6 department has been busy with several major projects, some of which were completed during fiscal year '94. The completion of these projects also represents the efforts of all the employees who work to get a job to the construction phase and see it through to completion, including design, right of way, district counsel and materials and research.

The completion of the improved Interstate 64/Route 40 and Interstate 270 interchange was celebrated in December 1993. This St. Louis County interchange has the state's second highest volume of vehicles at 250,000 per day. The improved interchange took about five years to construct, but fortunately there were no injury accidents during that time.

District 6 employees also helped to open a new major river crossing in fiscal year '94. MHTD and the Illinois Department of Transportation opened the new Clark Bridge (Route 67) from St. Charles County to Alton, Ill., in January 1994. This new Mississippi River bridge is a cable-stay design and received a lot of media attention.

Construction continued at the Interstate 55 and Interstate 270/255 interchange in south St. Louis County. The last contract was awarded this fiscal year. Completed is scheduled for fiscal year 1995.

Construction began on a project to improve the Lindbergh Boulevard and Interstate 55 interchange in south St. Louis County. The improvements will include converting the diamond interchange to a single-point interchange. The new interchange is scheduled for completion in fiscal year 1996.

Also along Interstate 55, construction began to widen the Meramec River bridge. The widening will accommodate the future additional lanes on I-55. The project is scheduled for completion in fiscal year 1996.

One of the most unusual projects began this year. A hydraulic dredge project was awarded for the Route 370 project in St. Charles County. The project includes pumping more than 3 million cubic yards of material out of the Mississippi River to the location of the new route. This dredge project is scheduled for completion in early fiscal year 1996. Other construction work continued on Route 370. When its complete in fiscal year 1998, Route 370 will connect Interstate 70 in St. Peters to Interstate 270 in north St. Louis County.

Construction began on a project to improve the interchange at Interstate 44 and Route 100 in Franklin County. The work includes upgrading the interchange to a full diamond. The project is expected to be complete in fiscal year 1995.

Construction work also was active on Interstate 70 just west of Lambert International Airport. The project, which began late in the fiscal year, includes adding lanes to I-70 from Cypress Road to the St. Charles Rock Road. The project should be complete in fiscal year 1995.

DISTRICT 7

District 7, headquartered in Joplin, has 445 full-time employees: 17 administrative, 41 construction, 29 equipment and procurement, 287 maintenance and traffic, 12 materials and research, 12 right of way and 47 design. Approximately 49 temporary employees and 49 summer students were employed during 1994.

District 7, the southwest district, encompasses the 11 counties of Barry, Barton, Bates, Cedar, Dade, Jasper, Lawrence, McDonald, Newton, St. Clair and Vernon.

The district has 37 maintenance buildings. There are three resident engineer offices located at Neosho, Carthage and Nevada.

The district maintains 3,358 miles of highway; this includes 60 miles of interstate, 753 miles of primary and 2,545 miles of supplementary roads.

The district striping crew completed 5,048 miles of striping this year. This included 3,046 miles of centerline and no-passing zones and 2,002 miles of edge-line. An additional 580 miles of no-passing zones and 40 miles of edge-line were added to the striping program to improve safety. Larger glass beads were also used this year in the traffic paint to help

*THE SOUTHWEST
AREA DISTRICT,
HEADQUARTERED
IN JOPLIN*

improve wet-night visibility. The striping crews operated waterbased acrylic and high-heat paint striper this year but will receive a new waterbase paint striper next year to replace the high-heat paint striper.

The district sign crew and maintenance buildings maintained more than 44,000 signs this year, which included approximately 18,500 signs on lettered routes, 16,500 on primary routes and 9,500 on supplemental routes. All of these signs are inspected annually.

Permit inspectors issued 1,094 permits. Of the 1,094, 78 were for commercial entrances, 285 for private entrances and 731 for excavation permits.

Major construction projects in District 7 during the period of July 1, 1993, to June 30, 1994, included the following:

- *Awarding of the next three grading and bridge contracts on the Route 71 relocation from Interstate 44 to Arkansas. This places the first 6.8 miles under contract. The first two paving contracts on the Route 71 relocation were also awarded. These included the I-44 interchange and the Route FF interchanges.

- *Newton County -- bridge widening on six structures on Interstate 44 from the Oklahoma State Line to just east of Route 71.

- *Barry County -- grading, bridge and concrete pavement to improve vertical and horizontal alignment on Route 39 near Jenkins and replace deficient bridge over Jenkins Creek.

- *Construction of two ramps to complete interchange at Route HH on Route 71 Alt. in Jasper County near Carthage. Also construction of interchange at North Francis Street on Route 71 in Jasper County, north of Carthage.

- *Lawrence County -- widening and resurfacing of Route 39 from 0.3 miles west of Route K to Route 60 in Aurora (three-lane section from Route K to Route 60).

- *Major resurfacing projects included six miles on Route 60 in Newton/Barry counties from three miles east of Barry County to Route 97; five miles on Interstate 44 on the eastbound lane in Jasper/Lawrence counties near Sarcoxie; and three miles of dual lane resurfacing on Route 54 Vernon County, west of Nevada.

As of June 30, 1994, the district had 495 Adopt-A-Highway groups covering 784 miles for litter pickup, mowing and beautification.

The district Materials Department inspects for compliance with the specification all the materials used in constructing and maintaining the highways. This includes more than 1,225,000 tons of aggregate, 293,000 tons of cement and 21,000,000 gallons of asphalt. Other major items inspected include plain and epoxy-coated reinforcing steel and dowel bars, galvanizing of steel signal and lighting poles, sodium and calcium chloride, concrete pipe, oil, grease and anti-freeze. They also perform soil surveys, condition surveys and bridge foundation investigations to use in highway and bridge design.

District 8 encompasses a 12-county area with 3,648 miles of state highways. The district boundaries extend north including Hickory County, which includes the Pomme De Terre Lake area. To the east are Laclede, Webster, Wright and Douglas counties. They include the cities of Lebanon, Mountain Grove and Ava. To the south, District 8 runs to the Arkansas state line and west to the Lawrence County line. This area includes the Ozark Mountain region, home of Branson and the lakes area.

The Ozark Mountain Region is southwest Missouri's leading tourist attraction with the Branson area expecting more than six million tourists this year. District 8's main metropolitan area is Springfield with a population of approximately 150,000 people.

District 8 has 480 employees with most employees working from 39 maintenance buildings throughout the district and construction project offices in Springfield, Buffalo and Branson.

The May 1994 Employee of the Month was Senior Payroll Clerk Janet Cutbirth.

The District 8 Design Department has been very busy preparing plans especially in the Branson area. Activities include working with the consultant on the development of the Ozark Mountain Highroad, Route 65 north of Branson, Route 65 at Hollister and also Route 248 in Branson. The department prepared paving plans for the James River Freeway and other projects including bridge replacements, resurfacing and other miscellaneous projects within the district. The district's construction season was busy, especially in the Branson area.

In the Springfield area, construction continues on the James River Freeway between Kansas Expressway and existing Route 60 west of Springfield. Paving is expected to be completed by late 1995.

Other major construction projects are as follows:

- *Interstate 44 — Greene County;
- *Route 65 — Dallas and Taney counties;
- *Route 465 — Taney County;
- *Route 465 — Stone County;
- *Route 32 — Polk County;
- *Route F — Laclede County; and
- *Route 32 — Laclede County.

The Adopt-A-Highway program continues to be a great success in the Ozarks. As of June 30, 1994, 682 groups had adopted a portion of District 8 highway through the program. Work continues on the Growing Together projects in the district. Growing Together is a cooperative beautification program between the department and state and local governments, civic groups or others. At the present time, District 8 is working together with the forestry class at Ozark Technical College, M-D Pneumatics and the cities of Ozark and Marshfield.

*THE
SPRINGFIELD
AREA DISTRICT,
HEADQUARTERED
IN SPRINGFIELD*

**THE SOUTH
CENTRAL AREA
DISTRICT,
HEADQUARTERED
IN WILLOW
SPRINGS**

District 9, headquartered in Willow Springs, encompasses the 13-county region of Carter, Crawford, Dent, Howell, Iron, Oregon, Pulaski, Phelps, Ripley, Reynolds, Shannon, Texas and Washington counties.

The district's Maintenance and Traffic Department has an authorized staff of 11 office and 285 field personnel. They maintain the largest district in the state, which includes 3,726 miles of roadway. Of this, 78.5 miles are interstate; 1,048 miles are primary routes, and 2,599 miles are supplementary routes. These routes are maintained from 36 maintenance and three special crew buildings, which are divided into 11 sub-areas.

The Adopt-A-Highway program has become increasingly popular in the District 9 region. As of June 30, 1994, 345 groups had signed their adoption papers in District 9.

The Construction Department in District 9 had 51 full-time and seven part-time employees in 1994. The following major projects were completed.

- *widening and resurfacing 14 miles of Route 63 south of West Plains, Howell and Oregon counties

- *widening, adding climbing lanes and resurfacing 5.1 miles of Route 60 in Carter County

- *six miles for new location of Route 60 in Van Buren and Carter County

- *bridge replacement on Route 8 in Crawford County

- *Various asphalt overlays were in progress throughout the district.

The Right of Way Department's 10 employees have been in the real estate business during fiscal year 1994. They acquired right of way for highway construction totaling \$3,278,190. This included 230 parcels — 226 by negotiation settlement and four by condemnation or 98 percent by negotiation and 2 percent by condemnation.

Payments totaling \$119,828 were made this year under the Relocation Assistance and Payment Program to assist displaced families in relocating. During fiscal year 1994, 21 relocation claims were processed and paid. Also, appraisals were obtained on 299 parcels. Receipts from rental property acquired for future construction and from the sale of right of way and facilities no longer needed for state highway purposes totaled \$24,650.

The District 9 Design Department has 35 employees. Currently they are doing design work on 113 of the 184 projects listed on the Right of Way and Construction Program. Consultants are doing four projects, and another district is designing two projects. Major design emphasis has been on Route 63 between Willow Springs and West Plains, and major planning and location studies include the Route 60 corridor east of Willow Springs and the Rolla to Salem area.

The Fiscal Services Department has 10 office personnel and two maintenance personnel. They handle payment of payrolls and commercial and equipment invoices. They're also responsible for daily and monthly reports from the maintenance buildings and construction offices. Further responsibilities include life and health insurance, workers' compensation, credit union, building maintenance and district correspondence.

The District 9 Equipment Division has 31 employees: 18 field mechanics and helpers, nine shop personnel and four stockroom employees. In the

13-county district, they take care of 553 units including 45 cars, 54 pickups and carryalls, 190 trucks, 87 tractors, 43 loaders, 36 distributors, 47 motorgraders and 51 other units. The stockroom personnel oversee a parts and supplies inventory of \$252,848 and have an average monthly sale of \$31,000.

The Materials and Research Department has 10 employees. They inspect 37 quarries, 113 gravel and sand sources and 15 ready-mix plants. In fiscal year 1994, they inspected 857,622 tons of aggregate including 817,243 tons of crushed stone; 29,399 tons of gravel; 8,605 tons of sand and 2,375 tons of porphyry. Many materials such as calcium chloride, sodium chloride, paint, corrugated metal pipe, reinforced concrete pipe and others were inspected, also.

The Human Resources Department was established, and the district human resources manager position was filled in August 1993. The human resources manager assists district employees in the administration of department policies, procedures and activities. Specific functions include the employment, recruiting and hiring process, career development and counseling, disciplinary and grievance procedures, Equal Employment Opportunity and affirmative action, personnel records, drug testing and pre-employment physicals, investigations, Americans With Disabilities and other disability administration.

During fiscal year 1994, 124 drug tests were conducted, and 44 physicals were given. The random drug testing program was implemented, also. The district received 146 job vacancy announcements, and 805 employment applications were processed. During the spring, 76 seasonal/summer students were hired. Of these, 35 were temporary hires. Forty-one were summer students, of which eight were interns. There were 25 new employees permanently hired.

District 9 has had four Employees of the Month. Bob Woodring, district highway design engineer, was the October 1983 honored employee. Steve Hutchinson, field mechanic, was the May 1986 Employee of the Month. Dave Smith, senior highway designer, was honored as the November 1991 Employee of the Month, and Mary Hodo, administrative secretary, was the September 1993 honoree.

The implementation of the freight mail system has been a valuable asset and proof of positive results from the district's quality improvement process.

**THE SOUTHEAST
AREA DISTRICT,
HEADQUARTERED
IN SIKESTON**

District 10 encompasses the counties of Scott, New Madrid, Mississippi, Pemiscot, Dunklin, Butler, Wayne, Stoddard, Bollinger, Cape Girardeau, Madison, Perry, Ste. Genevieve and St. Francois. The Naylor Maintenance Building in Ripley County is also part of District 10. The 14-county district in southeast Missouri covers 7,984 square miles and has 3,858 road miles.

District 10 has approximately 532 full-time salaried employees. During fiscal year 1994, 10 employees retired; seven permanent employees were hired. One employee resigned. Three employees were released. The district hired 44 college students and 40 seasonal maintenance workers.

The District 10 Highway and Transportation Employees' Credit Union, managed by the district personnel services agent, serves the financial needs of the state Highway Patrol and Highway and Transportation Department members. Total membership was 1,049 with total assets of \$6,287,244. During the past fiscal year, 497 loans totaling about \$2,289,604.32 were processed.

District fiscal services employees processed about 9,024 checks to suppliers; checked and extended totals on more than 11,570 daily crew reports; added more than 786 items to the tool inventory; took inventory at 36 maintenance buildings, five resident engineer offices and the district office; and verified that 3,555 pieces of equipment were in service and tagged properly. About 156 items were transferred, and 220 items were deleted from the inventory. Also, material, petroleum and capital investment inventory were taken at all maintenance buildings. Other items included processing commercial invoices, physical inventories and usage reports for 826,000 gallons of petroleum products.

Fiscal services employees verify time for personnel including full time, temporary, seasonal and overtime.

This department also processed 112 property damage claims, 111 auto liability claims and 92 new workers' compensation claims. Fiscal Services issued about 667 overdimension permits from June 30, 1993, to July 1, 1994.

The Right of Way Department Annex moved in February 1994. The office is now located in the block north of the district office, in a mini-mall complex. It had 11 employees during this time. The Right of Way Department acquired 94 parcels with 78 of those negotiated, two free deeds and 14 condemned. There were 11 active projects during this timeframe. There were 84 staff appraisals and eight fee appraisals performed during this period. The staff performed 18 entire project reconnaissance appraisals, nine fee study appraisals, 12 update appraisals, three special project appraisals, six entrance widening appraisals and one excess land appraisals.

Only two segments of the Cape Girardeau bridge still required much of the Right of Way employees' time. The relocation mainly in Cape Girardeau took a lot of time. Preliminary work began on the Route 67 Bypass at Poplar Bluff and the purchase of two hardship tracts. Many right of way relinquishments on excess parcels of land and many changes of access were accomplished. Employees in this department participated

in several other activities including first-aid training, awards and recognition team, safety committee, concessions team, facilitators team, MHTD News, credit union officer and Missouri charities. Some employees received training for asbestos removal and inspection, communication in real estate acquisition, relocation assistance and appraisals.

The Materials and Research Department inspects the materials used to construct and maintain District 10 highways. Materials had 16 full-time employees and one summer employee during fiscal year 1994.

Materials has many projects where employees are performing independent assurance sampling and federal-aid sampling and testing. They verify that the job control or acceptance inspector follows proper test procedures and that the equipment being used for acceptance testing is working correctly. This testing is performed only on federal-aid projects.

The district soils and geology technologist completed seven soil surveys, sampled 22 quarries and investigated numerous slides.

The Materials and Research Department is helping on a statewide research project called Life Expectancy Determination of Corrugated Metal and Reinforced Concrete Pipe. The project will compare these two types of roadway crossroad drainage pipe.

Materials and research personnel have inspected various materials for the district Maintenance Department such as glass beads, brush and weed killers, grader and maintainer blades, sodium and calcium chloride for ice control, paint, anti-freeze, gear oil and grease, hydraulic fluid, lubricating oil, asphalt and various aggregates.

In District 10, personnel inspected the following quantities: various aggregates — 1,104,871 tons; cement — 52,470 tons; asphalt — 9,421,783 gallons; black and epoxy coated reinforcing steel — 1,222,473 pounds; corrugated metal pipe — 46,122 linear feet; reinforced concrete pipe — 4,108 linear feet; plastic joint compound — 63,031 pounds; hot-pour joint materials — 448,320 pounds; reinforced concrete I-girders — 376; reinforced bridge deck panels — 2,712; precast concrete median barriers - 1,506 linear feet; guard rail and fencing — 6,363 linear feet; fertilizer — 111,922 pounds; paint — 1,640 gallons; welded wire fabric — 146,370 square feet; and calibration of concrete R/M plants — 16.

The Design Department has 52 employees with five design squads and two field survey crews. Design has completed detailed construction plans for 22 highway projects totaling nearly \$21 million, which were let for construction in fiscal year 1994.

Route 60 remains a top priority. The goal of upgrading Route 60 to a four-lane freeway facility is becoming a reality one section at a time. The Design Department continues to produce design plans to upgrade the final segments. The design plans for a 2.8-mile section of Route 60 west of Dexter was let in fiscal year 1994. The plans for five additional Route 60 projects between Morehouse and Poplar Bluff are being designed for a 1995 letting.

Design projects were varied with new construction, resurfacing and bridge replacement or strengthening projects. Also 29 leveling course projects were designed and let for district maintenance.

The programs coordinated by the district liaison engineer during fiscal year 1994 included the review of the Off-System Bridge Replacement Program, the Surface Transportation Program and the Enhancement Funds Program. There was \$652,250 obligated for the construction of five off-system bridge projects and the engineering on seven additional projects. There was \$622,000 obligated for the construction and engineering on three Surface Transportation Program projects. There was also approximately \$40,000 obligated for enhancement projects.

The Construction Department has five resident engineer offices and 65 employees.

Some major construction projects are as follows:

- *Route 74, Cape Girardeau County;
- *Interstate 55, Cape Girardeau County;
- *Route 32, St. Francois County;
- *Route 25, Dunklin County;
- *Route 412, Dunklin County;
- *I-55, Pemiscot County;
- *Route 60, New Madrid County;
- *Route 153, New Madrid County;
- *Route 61, Pemiscot County;
- *Route 114, Scott County;
- *Route 25, Stoddard County; and
- *Route 60, Stoddard County.

During the fiscal year, construction employees inspected approximately 154 miles of contract leveling course routes. All of the roads and bridges affected in the flood of 1993 were repaired and put back in service.


Maintenance and Traffic has 12 areas, 36 sub-areas and special crews in Sikeston with about 360 employees.

The district ranks first in highway miles and third in land area. District 10 has 198 miles of interstate, 742 miles of primary and 2,918 miles of secondary roads.

The following is the breakdown by county of the 1,366 state highway system bridges maintained by District 10: Bollinger — 64; Mississippi — 61; Ste. Genevieve — 64; Butler — 117; New Madrid — 145; Scott — 99; Cape Girardeau — 142; Pemiscot — 118; Stoddard — 165; Dunklin — 109; Perry — 51; Wayne — 114; Madison — 61; and St. Francois — 78.

The flood of 1993 had a huge impact in District 10, especially with the maintenance forces. The record flood stages on the Mississippi River caused many roads to be closed and subsequent repairs to be made. Heavy rainfall in November caused flash flood conditions in the northern counties of the district, which also required many repairs. With all of this, District 10 maintenance personnel still managed to resurface about 130 miles of road with a cold mix leveling course. Contractors resurfaced 155 miles of highway with one-inch, machine-laid hot mix. District 10 used more than 100,000 cubic yards of mix to patch and make routine surface repairs. More than 40,000 acres of right of way were moved.

Traffic employees installed two new signals during the last year and



presently maintain 70 signals across the district. There are also 400 mobile radios within the district's communication system, which the signal crew maintains.

The permit section issued approximately 1,000 excavation permits and 172 billboard permits. There are more than 1,400 permitted billboards throughout District 10, which are administered and renewed annually.

District 10 administers the Adopt-Highway program in the southeast region. As of June 30, 1994, the district had 479 groups participating in the program with 850 miles adopted.

The District 10 Equipment and Procurement Department maintains and repairs more than 675 pieces of equipment. Besides normal equipment maintenance, there have been several equipment modifications implemented. The district purchased 10 International crew cabs, three four-wheel drive loaders, two backhoe trailers, 20 pickup trucks and 10 new passenger cars during fiscal year 1994.

Four stockroom employees in the procurement section issue local purchase orders, order parts and supplies on requisitions, check commercial invoices against purchase orders and code items for payment. They enter inventory records on computer and make sure they balance monthly, and keep district gas, oil and other records.

District 10 has implemented the district freight system. It is a truck/trailer combination that makes deliveries to the northern and southern regions of the district four times a week.

As part of the department's concern for the health and welfare of its employees, District 10 has participated in an in-house cardiopulmonary resuscitation (CPR) and first-aid training session sponsored by the American Red Cross.



THE

MHTD

DIVISIONS

1994
ANNUAL
REPORT



The Audit and Business Analysis Division has three areas of responsibility in the Missouri Highway and Transportation Department's (MHTD) cost accounting systems. The first area encompasses operational reviews at the division and district level in such activities as construction, right of way, preliminary engineering, administration, financial management, information systems, planning and transportation. These reviews determine if division and district operations comply with published department procedures and state and federal regulations including the economy and efficiency of the operations. This insures the integrity of developed and incurred costs.

The division's second area of responsibility involves auditing final invoices for utility and railroad relocations, federal-aid urban (FAU) projects, bridge replacement off-systems (BRO) projects, transportation grants and miscellaneous billings to the department.

The third area includes analysis of the department's accounting systems and development of written operating and coding procedures.

AUDIT TOTALS FROM JULY 1, 1993, TO JUNE 30, 1994, WERE AS FOLLOWS:

Utilities	56	\$6,526,586.39
Railroads	10	1,983,849.23
Federal Aid Urban	29	36,683,759.72
Bridge Replacement Off-System	83	12,675,387.67
Miscellaneous	28	3,754,297.46
Pre-Audit Contract Reviews	<u>168</u>	<u>38,744,370.13</u>
	374	\$100,368,250.60

BRIDGE

The Missouri Highway and Transportation Department Bridge Division is responsible for the design, estimating and special provisions, rating and shop inspection of the state highway system bridges. The division also reviews bridge replacement plans funded through Bridge Replacement Off-System and Federal Aid Urban monies.

During fiscal year 1994, the division completed 117 new bridge and retaining wall designs for letting. Of this number, 91 were designed for major system routes and 26 for supplementary routes.

The total length of new structures contracted during the fiscal year was 24,359 feet at a cost of \$63,763,228. Of these amounts, 4,581 feet were contracted at a cost of \$8,918,491 for the supplementary system.

In addition to the new structure designs, 135 designs were contracted for repairing, widening or extending for 45,562 feet of existing bridges at a cost of \$41,053,983.

Steel fabrication inspectors made 259 trips to 20 fabrication shops to

inspect bridge steel, and 403 sets of shop drawings were processed.

The division was involved in liaison with consulting engineering firms on 40 bridge projects, which included 12 major bridges.

Besides structure design, the division rated county and municipally owned bridges as part of the Federal Highway Administration Bridge Replacement and Rehabilitation Program.

Division personnel reviewed programming eligibility for 52 proposed bridge replacement projects, 104 preliminary layouts and 138 sets of plans, specifications and estimates for bridge structures on the Federal Off-System Bridge Replacement and Rehabilitation Program and Strategic Transportation Plan.

Major structures started this year include a new bridge at Boonville across the Missouri River and a second Grand Glaize Bridge at the Lake of the Ozarks.

Major rehabilitation work included the Interstate 70 bridge across the Missouri River at Rocheport and the Interstate 55 bridge across the Meramec River in St. Louis and Jefferson counties.

CHIEF COUNSEL'S OFFICE

The Chief Counsel's Office has its headquarters in Jefferson City and has five district counsel offices located in Kansas City, Jefferson City, Kirkwood, Springfield and Sikeston. There are 35 attorneys and 42 support staff for a total staff of 77.

As of June 30, 1994, the Chief Counsel's Office had a caseload of 445 cases and 400 Highway and Transportation Commission and other agency administrative proceedings for a total of 845 files open.

The following summary of activity by the office covers the fiscal year July 1, 1993, to June 30, 1994:

Condemnation Cases

Disposition was effected in 175 cases, and 110 exceptions were filed. There were 34 jury trials reported. The sum of \$2,104,301 was collected on final judgments where a return from the commissioners' award was due the commission.

Inverse Condemnation — Eleven cases were filed against the commission, and six were closed.

Administrative Hearings

Outdoor Advertising — There were three hearings conducted involving three signs.

Utility Relocation — One hearing was held.

Relocation Assistance — One hearing was held.

Highway Beautification Cases

Outdoor Advertising — One case was opened; 15 were closed.

Junkyard Cases — Nine cases were opened; six were closed.

Risk Management Cases

General Liability — Forty cases were filed against the commission, and 51 were closed. There were 14 jury trials reported.

Fleet Vehicle Liability — Fifteen cases were filed against the commission, and 15 were closed. There were six jury trials reported.

Property Damage — One case was filed by the commission, and one was closed.

Workers' Compensation Cases — There were 199 claims filed with the Missouri Division of Workers' Compensation, and 151 claims were closed.

Workers' Compensation Subrogation Cases — Four cases were filed by the commission, and 10 were closed. There was one jury trial.

Contractor Cases — Four cases were filed against the commission, and three cases were closed.

Miscellaneous Cases — Three cases were filed against the commission, and 12 were closed.

Discrimination Cases — One case was filed against the commission, and none was closed.

Retirement Board Cases — No cases were filed against the commission, and two were closed.

Medical Insurance Plan Cases — No cases were filed against the commission, and none was closed.

Annexation Cases — One case was filed against the commission, and one was closed.

Other Agency Claims

Employment Security Appeals -- No claims were filed against the commission, and none was closed.

Equal Employment Opportunity claims — Seven claims were filed against the commission, and 12 were closed.

Missouri Commission on Human Rights claims — Six claims were filed against the commission, and seven were closed.

EPA/DNR claims — No claims were filed against the commission, and none was closed.

Miscellaneous — Numerous contracts were prepared and reviewed, legislative bills drafted and reviewed, and legal opinions rendered.

The Missouri Highway and Transportation Department's (MHTD) Construction Division administers construction contracts. After the Highway and Transportation Commission awards construction work, MHTD issues a notice to proceed to each successful contractor and establishes contract finances. The division's personnel inspect each project so the department keeps aware of the construction progress.

During fiscal year 1994, construction work continued on interstate routes 55, 70 and 270 and routes 67 and 115 in the St. Louis area; interstate routes 29 and 70 and routes 40 and 291 in the Kansas City area; routes 54 and 63 in the Callaway/Audrain county area; and Interstate 70 and Route 63 in the Boone County area.

Interstate system contracts included upgrading existing dual facilities to interstate standards and implementing the latest safety features. About 122 miles of interstate road are being rebuilt or brought up to the latest safety standards.

The division administered the construction or re-construction of approximately 1,718 miles of roadway. The division administers the Off-System Bridge Repair Program and the Federal Aid Urban Program. These programs have increased during the fiscal year.

Primary and supplementary system contracts involved new construction, widening and resurfacing projects and the rehabilitation and replacements of bridges. The contracts included rural and urban construction; the projects are financed with a combination of federal aid and state funds.

The division provides supportive services for disadvantaged-owned firms. MHTD continues to seek out and certify minority and women contractors to help meet the goals of the disadvantaged business enterprise (DBE) program. Bidders on construction projects are obligated to take affirmative action in using DBEs. MHTD is also implementing a program that will set aside designated projects for qualified DBE firms only. Through affirmative action efforts, \$46,177,058 in state and federally assisted contracts and subcontracts were awarded to DBEs during fiscal year 1994.

The division maintains a reasonable cost of inspecting construction projects by upgrading equipment, using new technology and computer programs and continuing employee training. The division also participates with contractors in a value engineering program, which helps produce an equal or better product at less cost and encourages partnering to establish cooperation between MHTD and contractors.

ACTIVE CONSTRUCTION PROJECTS

System federal-aid funds	Awarded in fiscal year '93	Awarded in fiscal year '94	Total
Interstate	13	38	51
Primary	33	71	104
Supplemental	3	15	18
Off-System			
Subtotal	49	124	173
100 % state funds			
Interstate	0	0	0
Primary	2	59	61
Supplementary	3	81	84
Subtotal	5	140	145
Total projects	54	264	318

DESIGN

The Design Division prepares MHTD's roadway improvement studies and plans and handles the letting of highway project contracts.

MHTD holds meetings and formal hearings to explain the need and purpose of highway improvements and to obtain public comment. Coordination with local, state and federal agencies is required.

During fiscal year 1994, the division determined location and design for 30 highway improvements as a result of public hearing. Several other public meetings were held to gather public input.

As part of its duties early in a project, the Design Division uses aerial photography to conduct photogrammetric surveys. During the fiscal year, ground models were prepared using photogrammetric surveys on 182 miles of road. Field surveys supplement this work. These surveys were transferred electronically to MHTD's district offices for use in their roadway design.

The Design Division provides photographic services for MHTD and limited services for other state agencies. This support required the photographers and photographic technicians to perform 225 on-location photo sessions. This work included developing and printing film, making color copies, and manual and custom prints. The aerial photographer flew 32 days to provide aerial photography for design of projects. The video photographer produced 25 training films.

Phase IV of the Computer-aided Design and Drafting (CADD) system was completed during fiscal year 1994. This phase has been in progress for the past 24 months. A transition was made to use RS/6000 workstations on a distributed network of computer servers, replacing the mainframe drafting terminals. Additional workstations were provided to all districts. All designers and technicians now have a workstation appro-

priate for their needs.

The CADD training staff made district visits and conducted training at the facility in Jefferson City. During the remodeling of the new training center facility, advanced Civil Engineering Automation Library (CEAL) and ProCADAM training was given in all 10 districts. More than 250 designers and technicians participated in these training classes. Using the Eastland Drive training facility in Jefferson City, 97 designers were given 40 hours instruction on using MHTD's roadway design software, CEAL. Construction personnel were also introduced to the design software. Forty-eight construction inspectors received 40 hours of CEAL training with the CADD staff's support.

New surveying data collection procedures were finalized for design and construction surveyors. The 19 design survey crews and 24 construction employees were given advanced instruction. A surveying seminar also was provided to design and construction surveying employees.

Forty-three percent of contract plans are produced using CADD. These jobs account for 58 percent of the estimated construction contracts. All of the surveying data collected from photogrammetry and from ground surveys are now stored in electronic form.

The Design Division administers the department's Value Engineering (VE) Program. Through the program, department personnel apply the value engineering discipline on selected projects, items, procedures and processes to reduce cost and improve productivity.

During 1994, MHTD completed VE studies for 13 construction projects. These studies resulted in an estimated savings of \$8.9 million in construction cost and \$2.2 million in accident reduction and lifecycle costs. Thirty-nine employees were trained at a value engineering workshop presented by the National Highway Institute. The department realized an additional savings of \$787,600 from recommendations submitted by contractors on active construction projects.

The Design Division's Environmental Section evaluates potential natural resource impacts for each project. A variety of specialists in areas such as archaeology, biology, architectural history, noise abatement, air quality, socioeconomics and other disciplines evaluate potential transportation project impacts before construction. During 1994 the Environmental Section performed extensive analyses in the development of three Environmental Impact Statements, two Environmental Assessments and 19 categorical exclusion justifications. Additionally, detailed cultural resource surveys were performed on 49 projects, and 176 wetland evaluations were accomplished.

The Disadvantaged Business Enterprise (DBE) program lets businesses owned and controlled by socially and economically disadvantaged individuals or women participate in contracts or subcontracts financed in whole or in part with federal funds. DBE firm participation during fiscal year 1994 was \$51.8 million.

The Design Division also administers several federal-aid programs that provide funding for cities, counties and rail-highway crossing safety improvements.

The Surface Transportation Program -- Urban (STPU) provides

federal funding for streets and highway construction in cities and urban areas with populations between 5,000 and 200,000. About \$1.6 million was obligated in Missouri cities for this program. The STPU funds generally finance 80 percent of the cost of eligible projects with local jurisdictions providing 20 percent matching funds. During fiscal year 1994, six projects were approved for construction under this program.

In addition to these funds, urban areas with populations greater than 200,000 are provided federal funds for use on projects located in the urban areas. During 1994, 13 projects were approved for construction in those areas. These projects required an obligation of approximately \$6.9 million.

The STPU Bridge Replacement Program financed nine bridge replacement projects in urban areas, at a cost of about \$9.2 million. Bridge replacement funds finance 80 percent of the cost with local agencies responsible for the remaining 20 percent.

The Off-System Bridge Rehabilitation and Replacement Program provides federal funds for bridge repair and replacement on county roads not on a federal-aid system. About \$14.5 million was obligated for projects qualifying for this program with counties providing 20 percent matching funds. During the fiscal year, 50 projects were approved for preliminary engineering charges; 68 were approved for construction, and 66 projects were placed under contract by the counties.

During the fiscal year, 11 bid openings were held. Projects totaling \$435.7 million were placed under contract. An average of 3.7 bids were received per project.

Prices decreased during the past year with the Missouri average composition cost index being 138.8 compared to base year 1987. The 1994 cost index reflects a substantial increase when compared with the 1993 cost index of 99.2.

THE FOLLOWING TABLE PROVIDES A SUMMARY OF PROJECTS AWARDED DURING FISCAL YEAR 1994:

	Awards (in million \$)	Miles	Projects
Interstate System	154.7	114.5	35
Primary System	214.6	340.2	98
Supplementary System and Maintenance Work	65.4	1491.1	320
Off-System (County Bridges)	14.5		66
STP Urban (Off State System)	<u>17.7</u>		<u>28</u>
	464.9	<u>1945.8</u>	547

Employees of the Equipment and Procurement Division maintain the equipment fleet and procure those items necessary for other employees to carry out their functions. The headquarters office staff has 25 employees, and 50 employees operate the headquarters garage, fabrication facility, warehouse, freight service and car pool.

On June 30, 1994, the division was maintaining 6,100 units such as passenger cars, trucks, carryalls, tractors, mowers and motorgraders. Operating this fleet during fiscal year 1994 used 3,200,000 gallons of gasoline and 5,200,000 gallons of diesel fuel. Maintenance of the fleet required 8,700 gallons of antifreeze; 86,000 gallons of lubricating oil; 47,500 gallons of hydraulic oil; 62,000 pounds of grease; \$923,500 worth of tires, tubes and chains; and \$1,500,000 worth of shop equipment, parts and supplies. Maintenance of the fleet required more than 100,000 person-hours.

A fleet of three airplanes is maintained to provide services such as aerial photography and transporting Highway and Transportation commissioners and MHTD employees. Three pilots are included in the division's staff.

Recent legislation requires all state agencies to reduce automobile gas usage. Efforts are under way to demonstrate the use of alternative fuels. A project testing compressed natural gas (CNG) is under way in St. Louis. This project was initiated through a \$100,000 grant from the Department of Natural Resources. As part of the project, CNG is provided to other state agencies. A similar project is planned for the Kansas City area.

The division procurement staff supplies employees with the equipment, tools, supplies and materials to do their jobs. Total purchases for the year exceeded \$20,000,000. To improve services and reduce inventory, annual contracts have been developed for purchase of items such as chain saws and lawn mowers. In addition, direct shipments from the suppliers are provided for items such as batteries, tires and tubes. This saves handling, storage and freight costs.

Some equipment such as snow plows, sign easels and rotary mowers are manufactured at the headquarters fabrication shop. In addition, some equipment is outfitted at the shop such as modifications for snow plows and hydraulic salt spreaders.

A cooperative purchasing project with the Office of Administration (OA) saves money and expedites some purchases. Examples include computers, telephones, paper towels, toilet paper, office paper and computer software. Purchasing of recycled products continues to be emphasized. Examples include office paper, toilet paper, refined oil and paper towels.

The freight system between the headquarters and district offices has expanded and continues to provide superior delivery service at reduced costs. As a result of the successful pilot project of freight service within districts 9 and 10, intra-district freight service has been implemented in the other districts.

Examples of materials purchased include 35,000,000 gallons of asphalt; 900,000 tons of aggregate; 720,000 gallons of traffic striping paint; 5,000,000 pounds of striping reflectorizing beads; 210,000 tons of snow removal chemicals; 30,000 sign posts and 300,000 pounds of motorgrader

blades.

A fleet of 90 vehicles is maintained by the headquarters garage and service attendants. This staff also provides a shuttle service for department employees in Jefferson City.

Service to fleet users has been improved through constructing dedicated field mechanics' work bays as selected sites and wash bays. The dedicated work areas free up limited maintenance work areas. The wash bays expedite the cleaning of equipment, especially following ice and snow storms. Chemicals can be cleaned off equipment immediately following a storm.

To improve overall equipment management, a multi-division, multi-discipline information engineering team is working on developing an equipment management system. A second team is analyzing our manufacturing process to prepare for automation.

***MATERIALS PURCHASED FOR HIGHWAY MAINTENANCE
DURING FISCAL YEAR 1994 ARE AS FOLLOWS:***

Various Types of Asphalt	35,391,530	gallons
Gravel/Stone/Chat	898,000	tons
Paint	720,000	gallons
Reflectorizing Spheres	5,000,000	pounds
Sodium Chloride	209,200	tons
Calcium Chloride	2,273	tons
Agricultural Seed	75,000	pounds
Treated Wood Sign Posts	18,270	each
Steel Sign Posts	12,000	each
Grader Blades	284,000	pounds

FISCAL SERVICES

The Fiscal Services Division includes two major functions: accounting and risk management. General accounting and expenditure control are a direct responsibility of this division. The division maintains all department financial records including the accounting systems for the Missouri Highway and Transportation Employees' and Highway Patrol Retirement System; the Missouri Highway and Transportation Department and Missouri State Highway Patrol Medical and Life Insurance Plan; and the workers' compensation and fleet vehicle liability self-insurance plans.

Accounting responsibilities also include federal billings and collections, legislative and internal budget preparation and all payment processing.

The division processed 239,579 checks during fiscal year 1994. Disbursements for highway and transportation functions equaled

\$1,022,899,127.47. Other state departments' disbursements from highway funds equaled \$135,554,313.90. Total disbursements from all funds equaled \$1,158,453,441.39.

The department is self-insured for workers' compensation and automobile liability. A contracted administrator processes the workers' compensation claims. During this past fiscal year, there were 1,306 workers' compensation cases. And the workers' compensation subrogation recovery unit collected \$183,807.48 involving 93 claims. In-house claims staff processed 858 automobile liability cases. All general liability claims are processed within the Risk Management office of the Fiscal Services Division. A total of 1,020 general liability claims were processed during the past fiscal year.

This division also administers the regulations and policies of the Highway and Transportation Department and State Highway Patrol Medical and Life Insurance Plan, which includes the State Furnished Life Insurance Plan and the Optional Life Insurance Plan. As of June 30, 1994, there were 11,031 health insurance plans, 8,318 state-furnished life insurance plans and 8,784 optional life insurance plans in force.

From July 1, 1993, through June 30, 1994, there were 168,285 health claim payments with \$23,405,781.08 paid in benefits. During the same period, there were 19 life claims under the state-furnished plan and 49 life claims under the optional life plan with \$285,000 and \$1,389,500 in death benefits to survivors.

During the fiscal year, the property damage recovery unit collected \$901,057.09 involving 1,375 claims.

The department's safety and health program is also part of the Risk Management office of the Fiscal Services Division. The department's safety coordinator supervises the safety program. Safety officers are located in the Kansas City, St. Louis, Springfield, Macon, Hannibal and Sikeston districts.

The employee health program includes the development and implementation of the pre-employment/post-offer physicals and the drug-testing and awareness program.

The Fiscal Services Division is also responsible for the Highway Employee and Highway Patrol Retirement System accounting and payroll records. From July 1, 1993, through June 30, 1994, the division processed 55,381 retirement system benefit payments totaling \$48,457,380.39.

The Human Resources Division provides assistance to MHTD in matters such as employment; college recruiting; employee training and development; wage and salary matters; personnel policy; affirmative action administration; employee relations; and personnel records and statistics maintenance. Human Resources professionals are located in the Main Office and most districts.

The division develops and implements programs to ensure that competent job applicants seek employment with the department, employees are properly trained and fair and productive working conditions exist.

The department is an equal opportunity employer and considers affirmative action a priority. The Human Resources Division and MHTD's districts strive to attract qualified minority and female applicants. The division monitors Equal Employment Opportunity (EEO) progress and keeps the headquarters office and districts informed. The division also monitors requirements of Title VI of the Civil Rights Act of 1964 to ensure that disadvantaged and women-owned business enterprises may participate in state and federally assisted programs.

Employee training and development is conducted through MHTD's supervisors, the Human Resources Division and outside specialists. MHTD's operational divisions provide technical skills training, and the Human Resources Division conducts and coordinates an integrated curriculum of supervisory and EEO training as well as new employee orientation. In addition, employees may attend work-related training classes offered by external consultants or educational institutions.

In January 1989 the department implemented a three-year Graduate Engineer Development Program for new civil engineers, which continues to be administered statewide. The program exposes the new engineer to the department's disciplines, policies, procedures and personnel in preparation for advancement. Each graduate engineer has a training plan for the first three years of employment.

MHTD has expanded its summer hire program to include summer internships for civil engineers. The internship program not only helps the department meet its peak season needs in the technician or para-professional areas but also lets students gain experience and learn more about department careers. MHTD employs interns statewide in the various engineering divisions.

MHTD tries to maintain a positive work environment for high employee morale and motivation. All personnel transactions are reviewed to guarantee equal and uniform salary administration and policy application.

The Human Resources Division keeps the department's job specifications current by conducting about 100 job audits per year.

The division processed 345 claims for unemployment compensation during the fiscal year and obtained 44 denials out of 64 protested claims. The division did not protest 281 processed claims because the claimants were temporary employees who became unemployed through no fault of their own and were entitled to unemployment compensation.

The division maintains centralized personnel records. The personnel data is used for employee profile, employee trends and staffing needs

analysis. Computer applications have improved personnel record-keeping.

MHTD had 6,338 salaried employees and 968 part-time and seasonal employees on June 30, 1994. MHTD hires temporary and emergency employees for such duties as snow removal.

From July 1, 1993, to June 30, 1994, the division processed 189 employees for retirement. Fifty-six were 55 to 59 years old with 30 or more years of service. Two were between the ages of 55 and 59 with 15 or more years of service, and five were between the age of 55 and 64 with 10 or more years of service. Also 89 employees between the ages of 60 and 64 with 15 or more years of service were processed, and 10 employees were 65 or older with four or more years of service. Ten employees elected to retire under the 80 and out provision, which became law June 19, 1992. Beginning Aug. 27, 1992, and ending Aug. 27, 1993, the law allowed employees to retire with full benefits if they were 55-59 years old and had years of service that when added to their age totaled 80 or more.

Twelve employees qualified for long-term disability and one qualified for normal disability. Four vested members also elected to begin annuity benefits. The Highway and Transportation Employees' and Highway Patrol Retirement System currently is paying benefits to 3,847 department retirees and survivors; 68 of these are long-term disabilities.

The average salaried MHTD employee has given 14 years, 1 month service to MHTD.

INFORMATION SYSTEMS

The Information Systems Division provides mainframe and microcomputing facilities, application programming, data base facilities, data entry and support for personal computer and office automation for the Missouri Highway and Transportation Department (MHTD). The division also oversees MHTD's telephone communications systems including voice and data.

The fourth phase of implementing Computer Aided Drafting and Design (CADD) was completed. In this phase, the department moved away from a mainframe base by installing powerful microcomputer workstations in the Planning, Bridge and Design divisions and in seven of MHTD's 10 district offices. Both the roadway design software (CEAL) and the drafting software (Professional CADAM) are supported on these workstations, which number about 200. The workstations are networked together to allow sharing of CADD programs, data and plotting devices.

A long-range strategic planning initiative was completed, resulting in a comprehensive plan for developing systems and technology to satisfy the department's information needs. The plan is called the Information Strategy Plan (ISP), and work has begun toward implementing the

recommendations identified in that study. Some of the benefits include better sharing of data, elimination of redundant data and programs, and better software for users to access information.

Four major software development projects were started using the Information Engineering (IE) methodology. When completed, they will produce systems for equipment management, manufacturing and five of the seven MHTD management systems. In the early phases of the projects, requirements for the systems are gathered in facilitated teams of department experts and Information Systems staff. Models of the data and activity processes are created in the Computer-Aided Software Engineering (CASE) tool to help define the requirements.

Other new applications were developed using a workgroup development product called Lotus Notes. Some of the applications include scanning and processing check payments, tracking expert witnesses in legal cases, tracking parcels of land acquired for right of way and automating service requests in Information Systems. About 250 department staff are using the product.

The number of personal computers in the Main Office and district offices continued to grow substantially to approximately 2,400. All new personal computers acquired for MHTD staff were connected to existing local area networks (LANs), which provide common services for applications, data and print distribution. The LANs are linked together with communications devices in a wide-area network (WAN). The wide-area network enables each of the local area networks to communicate with each other and to existing mainframe services, providing a more efficient method for distributing data among the main and district offices.


Phone systems in several of the district offices were upgraded with newer switches and expanded line capacity.

MHTD now has 2,300 computer users with access to network, electronic mail and mainframe services. More than 12,000 jobs per month are processed through the mainframe.

MATERIALS AND RESEARCH

The quality of materials for construction and maintenance of the state highway system is the primary responsibility of the Materials and Research Division. This and other assignments are reflected in the division's mission statement, which reads "to support the transportation system of Missouri through research, technical assistance, implementation of new technologies and by assuring the effective use of quality materials."

Materials and Research employees in each of the 10 districts coordinate field inspections for the sampling, testing and approving of materials. Employees at the Central Laboratory in Jefferson City test, evaluate and approve materials used in Missouri's highways and bridges. This division's tasks include material specifications preparation; geotechnical investigations; pavement type selection; soil, bridge and pavement condition



surveys; pavement rehabilitation recommendations; aggregate and general materials quality assurance; Portland cement and asphaltic concrete mixtures design and control; hazardous waste investigations; special investigations; research studies; and evaluation of new technology for the department.

The Central Laboratory is an approved and accredited facility that is inspected regularly by national inspection agencies such as the Cement and Concrete Reference Laboratory (CCRL) and the American Association of State Highway and Transportation Officials Materials Reference Laboratory (AMRL). The Central Laboratory maintains national accreditation from the American Association of State Highway and Transportation Officials.

Many materials routinely tested in the field also are tested in the laboratory to insure statewide uniform testing procedures and for specification compliance to assure quality materials are used. The laboratory also tests materials requiring special equipment and technical procedures. Efforts to automate laboratory tests through digital data acquisition continues and is helping provide uniformity throughout the department.

The division continues to develop and monitor new asphaltic concrete mixtures designed to help prevent premature rutting and add increased life. Stone mastic asphalt (SMA) and mixes containing polymers or different types of scrap rubber from used tires are some of the special mixes being tried. SMA is a special-purpose surface pavement mixture, which is rut resistant and based on European technology. Additional projects are in the development stage, including a nationwide mix design program being developed by the Strategic Highway Research Program (SHRP).

New product evaluation is an important division function. The need to make quick pavement and bridge repairs has generated "fast-setting" concrete patching materials and overlay systems, which division personnel evaluate. Three projects with an asphaltic overlay containing reclaimed ground rubber tires have been constructed and are being monitored for performance.

This division also obtains and interprets the subsurface information needed to design highways and bridges. Drilling equipment and crews from the division's headquarters in Jefferson City obtain the data. Crews and equipment are dispatched throughout the state.

Personnel also investigate various geotechnical matters including foundation stability and settlement of embankments; slide corrections; subgrade and base stabilization; environmental studies; bridge and wall foundations; sinks and mine subsidence; and the use of fly ash and other waste products. Special investigative techniques include electrical resistivity and seismic; down-hole photography and sonar; and field permeability testing.

The division is in the second year of sampling and testing for hazardous materials. Trained and certified asbestos inspectors travel to project sites throughout the state inspecting buildings slated for demolition. Samples are tested for asbestos content in the Central Laboratory. Crews also sample for suspected petroleum contamination at underground

petroleum storage tanks sites. Testing for petroleum contamination is also conducted at the Central Laboratory.

The department strongly supports the Strategic Highway Research Program (SHRP). SHRP has approved 21 test pavement sections in Missouri. MHTD also has submitted for SHRP's approval many special construction and maintenance effectiveness test sections. Materials and Research is committed to implementing new SHRP-developed technology. Equipment has been purchased, and personnel are being trained to conduct testing on bituminous binders in accordance with SHRP procedures, including SHRP Superpave mixture design parameters. An experimental project incorporating asphalt materials meeting SHRP Binder specifications has been developed and let to contract for evaluation.

A department representative serves on the Federal Highway Administration Technical Working Group for Concrete and Structures, which is continuing with the SHRP implementation program.

The Materials and Research Division has a representative on the technical research committee, which reviews completed and proposed research work and solicits problem statements on research.

The division is continually improving its operations through quality improvement training, automation and internal technical training.

From July 1, 1993, through June 30, 1994, a total of 15,365 samples were tested, including those of an experimental or investigative nature.

COMMONLY USED MATERIALS INSPECTED, TESTED AND APPROVED DURING FISCAL YEAR 1994:

Aggregates	13,288,486 tons
Cement	716,438 tons
Reinforcing Steel	22,144 tons
Culvert Pipe	
Corrugated Metal	179,993 linear feet
Reinforced Concrete	148,976 linear feet
Vitrified Clay	999 linear feet
Joints - Bituminous, Fiber	308,014 linear feet
Joints - Rubber	14,125 square feet
Joints - Metal	225,290 linear feet
Guard Rail	198,176 linear feet
Posts, Metal	49,119 posts
Precast Units	
Median Barriers	3,922 units
Concrete Bridge Beams	960 units
Concrete Inlets	1,146 units
Concrete Manholes	425 units
Piling and Round Posts	44,256 linear feet
Bituminous Material	
Cutback	13,083,174 gallons
Emulsified	24,994,440 gallons
Asphalt Cement	79,436,970 gallons
Paint	949,764 gallons

The Maintenance and Traffic Division is responsible for the maintenance and traffic operations of the 32,458-mile state highway system. The division also maintains 20 rest areas along the interstate system, 66 roadside parks on the primary and supplementary highways and 387,000 acres of highway right of way.

Since 1974, the department has built commuter parking lots along many high-traffic highways to conserve energy. There are about 90 parking lots with approximately 5,600 parking spaces.

One of the division's major expenses is maintaining low-type bituminous surfaced roads. In fiscal year 1994, the department surfaced 1,208 miles of low-type roadway under the maintenance leveling course program. In addition, 1,348 miles were resurfaced by contract under the contract leveling course program.

In 1986, the department began installing liquid calcium chloride or liquid magnesium chloride dispensing units at maintenance facilities along high-volume interstate and primary routes. Liquids are applied to salt and other abrasives to make these materials more efficient in removing snow and ice from the roadway. MHTD used approximately 1,350,000 gallons of liquid chloride in 1993-1994.

During the fiscal year, the following projects were begun:

July 1993 -- prefabricated metal building at the Hannibal district office for garage and storage; bulk paint storage building at Springfield maintenance lot; nine-bay prefabricated metal building at the Unionville maintenance lot.

September 1993 -- six-bay storage building at Joplin maintenance lot; two-bay salt storage building at Salem maintenance lot.

October 1993 -- 15-bay prefabricated metal building and 10-bay prefabricated metal building at Chillicothe maintenance lot; bulk paint storage building at St. Joseph maintenance lot; one-bay salt storage building at Licking maintenance lot.

November 1993 -- 18-bay prefabricated metal building, three-bay prefabricated metal building, one-bay prefabricated metal building at the Mountain Grove maintenance lot.

January 1994 -- 10-bay prefabricated metal building at Centerville maintenance lot.

March 1994 -- circular dome salt storage building in St. Louis.

April 1994 -- 30 by 60 foot storage building at Centerville maintenance lot.

June 1994 -- circular dome salt storage building at Route N maintenance lot, Platte County; and District 6 materials and research laboratory, Chesterfield, St. Louis County.

The division has nearly completed a five-year program to remove underground fuel storage tanks (USTs). To date, the division has removed 992 underground tanks, which could have leaked due to age or corrosion and potentially contaminated the soil and groundwater. Underground tanks have been replaced with above-ground tanks within an above-ground concrete containment structure, which is designed to contain any spilled fuel.

The division is improving its management of hazardous waste.

MHTD has conducted two surveys in an effort to eliminate hazardous waste. As a result of the surveys, the generation of hazardous waste has been reduced. The division has found innovative methods for managing hazardous waste streams that can't be eliminated. For example, lead contaminated sand and/or steel grit from preparing bridge structural steel for painting is sent to a secondary lead smelter as a substitute for their fluxing agent. Paint waste containing high BTU solvents is fuel blended and used as an industrial fuel at one of the cement kilns in the state authorized to burn hazardous waste derived fuel. The division has recently purchased six used-oil burners. These units will be tested at maintenance buildings to determine the feasibility of using them as a heat source. Also, at some locations, salt domes are being used to totally contain salt in storage, so the environment will not be harmed.

In 1987, the department, cooperating with the Department of Corrections and Human Resources, employed incarcerated personnel in maintenance activities. These crews perform labor-intensive duties such as landscape planting and maintenance and erosion control.

By using incarcerated personnel, the department benefits by having an economical labor pool complete duties that would be neglected. The incarcerated personnel benefit by participating in a typical work environment. The inmates are from minimum security institutions, have no history of escape and are within two years of release. We now have crews working in districts 1, 2, 4, 5, 6, 8 and 10 and the Highway Gardens.

Along with the University of Missouri-Columbia and Department of Agriculture, the division sponsored a one-day training program on pesticides. The program trains employees to properly use pesticides and will improve the safety and effectiveness of pesticide use on department right of way. This program began in 1987. More than 600 employees are certified.

During this fiscal year, Missourians showed much interest in the department's Adopt-A-Highway program. This program, introduced in 1987, increases public awareness of environmental problems along Missouri highways by letting the public adopt highway sections to mow, beautify or clean-up. By 1994, there were 5,617 adoptions covering about 8,614.2 miles of state highways. Most adoptions are for litter control, but more than 180 adoptions are for beautification plantings.

The public's desire to improve the appearance of highway right of way helped develop the department's Growing Together Program. Growing Together is a cooperative effort between the department, state and local governments and private groups to enhance the looks of state highways. MHTD and the departments of Conservation and Corrections and Human Resources help local agencies and groups in beautification projects such as landscaping interchanges and intersections. There are 30 projects.

In the Growing Together program, the groups can plant shrubs, trees and flowers. Local city or county governments propose areas to be developed. After MHTD approves the area, the local government or civic group funds the project. The department may help with design and bidding. When possible, incarcerated personnel plant trees, shrubs and flowers. The Conservation Department may provide seedlings to plant

along the beautification area borders.

MHTD issues overweight and overdimension permits through this division. The permits insure that vehicles exceeding the legal dimension and weight limits do not cause structural damage to bridges and pavements. There were 117,888 overdimension, overweight and overdimension/overweight special permits issued during the fiscal year. District offices issued 8,381 or 7 percent of the permits. Included in the total were 1,847 permits issued to governmental agencies or subdivisions at no charge.

Division personnel do routine inspections of all span-type bridges and culvert-type bridges greater than 20 feet on the state highway system.

The division uses two under-bridge inspection units called "Snoopers." Both Snooper crews performed fracture critical bridge member inspections and indepth inspections and ultrasonically tested pin connections on approximately 800 bridges this past year. All submerged portions of bridges are inspected by the dive team at least once every five years. During the 1993 summer flooding, crews did emergency inspections of all Missouri River bridges and many other affected structures.

A school to train off-system bridge inspectors was held in October 1993. Division repair crews completed structural repairs on 139 bridges. This included several major collision damage jobs. Division paint crews painted 64 bridges during fiscal year 1994.

Activities funded from 402 Program funds under 3+ Standards of the Missouri Highway and Safety Program and coordinated by the department are as follows.

Bridge Engineering Assistance Program — This program helps political subdivisions obtain information on the structural adequacy of bridges under their jurisdiction. Two consultants retained by the Highway and Transportation Commission perform these services. The consultants determine structural adequacy, establish posted weight limits and develop priorities for bridge repair or replacement. Structural adequacy reports and inventories were conducted on 93 bridges from October 1992 to September 1993 at an average cost of \$915 per bridge.

Traffic Engineering Assistance Program — This aids political subdivisions who have traffic engineering problems that need review but don't have personnel to do these reviews. Two consultants retained by the commission perform the service; they completed 19 studies in political subdivisions from October 1992 to September 1993. The average cost was \$4,280 per study.

A total of 38 intersections statewide were provided with traffic signal control for the first time. Four of these intersections were signalized by permit, and 16 intersections were signalized by maintenance forces or maintenance contracts.

New signal controllers were provided at 70 intersections that had previously been signalized to replace and upgrade equipment that was either old or had outlived its capabilities.

Contracts were let to expand the use of two-way mobile radios and handheld units in various divisions and district positions.

In 1993, MHTD's sign shop produced 111,233 new signs, 79,274 of

which were manufactured using reclaimed material. Sheltered workshop employees are involved in the reclaiming and reconditioning of button copy letters used on our structural signs. This process of reclamation saves both time and money in the production of structural signs, as well as providing the sheltered workshop with needed work. The use of reclaimed button copy has resulted in a savings of \$10,058.05 during 1993.

During the 1993 striping season, the department placed approximately 140,493.2 miles of centerline, lane line and edgeline using approximately 2,107,398 gallons of paint. This work was accomplished using the department's 23 striping trains. Each train is made up of the lead truck, striper and one or two attenuator trucks. Each striper also has a nurse truck, which is not included in the moving operation.

During the 1993 striping season, bulk storage facilities, consisting of two 10,000 gallon tanks per facility, were in various stages of completion in St. Louis, St. Joseph, Springfield and Sikeston. Following completion of these facilities, all districts with the exception of District 5 in Jefferson City, would have bulk storage for waterborne paint.

The division coded and placed in the accident data record system 81,032 accidents occurring on the state highway system during 1993. The Missouri State Highway Patrol and about 565 city and county enforcement agencies provided the reports.

The division continued its 120/Medium Improvement Program in fiscal year 1994, investigated seven locations where more accidents than normal had been occurring and implemented corrective measures.

Maintenance and Traffic investigated 100 locations that had 20 or more accidents throughout a three-year period and evaluated countermeasures for possible federal funding under Federal Highway Safety Program. This division provided the Planning Division with 19 locations to be put on the Right of Way and Construction Program at an estimated cost of \$1.8 million.

The 45th Annual Traffic Conference was held April 25-27, 1994, in Columbia. County, city, state and federal government representatives attended this two-day conference on solving traffic problems. Before the conference, Robert K. Seyfried, director of the Transportation Engineering Division at the Northwestern University Traffic Institute, presented a workshop on traffic signal timing.

The program of monitoring peak period freeway traffic in the Kansas City and St. Louis areas was continued during 1994. The location and severity of congestion on about 170 miles of freeways was documented.

The Motorist Assist Program patrols about 30 miles of freeways in both Kansas City and St. Louis. In the past year, Motorist Assist employees helped more than 15,500 motorists. Responses from our surveys indicate the motorists are very appreciative of this service.

A freeway incident management plan was developed for both Kansas City and St. Louis areas resulting in the implementation of a Motorist Assist Program on segments of the interstates in both cities.

A consultant study with 80 percent funding by the Federal Highway Administration (FHWA) will be started in Kansas City to study freeway management using Intelligent Vehicle Highway System (IVHS) technologies.

The Planning Division's efforts in fiscal year 1994 focused on our mission of providing direction and support to fulfill Missouri's transportation requirements. To do this, the division collected and maintained financial and roadway information, determined existing and future highway needs and developed planned improvements and financial programs to fulfill those needs.

During fiscal year 1994, the Long-Range Planning Section worked in four primary areas: public involvement, Intermodal Management System, bicycle and pedestrian plan/program and the 1995 Long-Range Transportation Plan. The section set up and facilitated more than 30 statewide meetings involving individuals from all walks of life for the purpose of understanding the problems, concerns, desires and expectations of MHTD's customers. One broad-based, multidisciplinary group of stakeholders was formed as a sounding board for long-range planning work-in-progress. A newsletter and several surveys were developed and mailed out. Informational booths were displayed at several conferences/events around the state. An external steering committee was formed to help with the development and implementation of a transportation planning module for Missouri middle-schools to be tested in fiscal year 1995.

Work began on the Intermodal Management System, a concept of managing information regarding movement of people and goods across more than one mode of travel. Toward this end, a development team including public and private sector expertise was established with the Long-Range Planning Section serving as staff. A survey was mailed to 500 of Missouri's largest businesses in an attempt to assess the freight and economic development issues facing the department.

Work began on a comprehensive bicycle and pedestrian program. The emphasis in fiscal year 1994 was increasing internal awareness, building bridges with other organizations and communicating with customers to identify needs. Nine regional focus group meetings were held across the state involving more than 200 individuals in determining the early focus of this program.

The three previous work items all support the development of the final primary work item -- the Long-Range Transportation Plan. Fiscal year 1994 work centered on determining the scope and context of this plan, which is due for completion in January 1995. Fourteen regional states were invited to a long-range planning workshop (MALT Shop) held in St. Louis by the Long-Range Planning Section. Planners and engineers discussed common problems and possible solutions facing state departments of transportation as they work to implement the provisions of the Intermodal Surface Transportation Efficiency Act. Input from all three of the above areas, together with internal vision and legislative mandates, culminated in seven policy statements, which were reviewed by the commission in a special June meeting.

The groundwork for a comprehensive public involvement program was developed to allow the public access to the long-range planning process. Additional work centered on the planning implications of conformity with clean air legislation, collecting flood data and using a geographical information system (GIS) in transportation planning.

The Programming Section prepared the 1995 Highway Right of Way and Construction Program that shows improvements scheduled for the next 13 years. The section also monitors and prepares monthly updates on the progress of Proposition A and the 1994 Statewide Transportation Improvement Program (STIP).

The comprehensive planning process continued in the state's six metropolitan planning areas. This process requires cooperation between the department, local jurisdictions and metropolitan planning organizations. The process develops and updates multimodal, long-range plans and transportation improvement programs in the urban areas of Kansas City, St. Louis, Springfield, St. Joseph, Columbia and Joplin.

The Traffic Section made approximately 4,500 portable vehicle counts and collected continuous count data at 108 permanent sites on the state's 32,000 miles of highways in fiscal year 1994. Speed surveys to determine compliance with the 55 mph speed limit were conducted at 34 statistically selected locations throughout the state. Vehicle miles of travel increased 2.9 percent from 1992, making 1993 the 12th year in a row of record-increasing travel in Missouri.

Automatic vehicle classification data was collected at 100 sites, and trucks were weighed with weigh-in-motion equipment at 30 sites for department information. Automatic vehicle classification and weigh-in-motion data was collected at 18 sites for the Strategic Highway Research Program (SHRP).

The section also prepared an annual vehicle report. The report includes information on travel for Missouri's roads and streets. Through roadside interviews with motorists, MHTD gathered selected travel characteristics at 20 locations within the state. The information from these studies was used to determine needs and plan improvements for the locations.

Work began on developing Missouri's transportation management systems. The mission of these systems is to enable a more efficient allocation of resources through the use of integrated data collection and analysis process, which monitors the performance of the transportation system and provides timely information to transportation decision makers. Using a cooperative effort with other MHTD divisions, metropolitan planning organizations and others, workplans were developed for eight management systems: pavement, bridge, highway safety, traffic congestion, public transportation, intermodal, traffic monitoring and maintenance. An information engineering project has been started to work on the technical details of these systems.

The Pavement Management Section developed its workplan and continued to perform automated condition surveys of approximately 20,000 miles of pavements on the state system using the department's Automatic Road Analyzer (ARAN). This data was used to develop the department's resurfacing program.

The mapping and drafting area of the Systems Support Section develops and publishes the official state map, county and city maps and many specialty maps. The division produced 3.5 million copies of the 1993-1994 Official Highway Map.

Systems Inventory collects and maintains current and historical project data including roadway information and construction costs. Data regarding system mileage and log miles are also maintained.

Rural and urban functional classification of the state's road and street system was maintained by the data systems area, which also updated Missouri's part of the national highway performance monitoring system. The Geographic Information System (GIS) Section continued development of analytical tools for various departmental applications of geographic information system technology.

A five-year demonstration project on the wearing surface of the Poplar Street Bridge and the pooled-fund, crash test program continued. The study to develop AASHTO Layer Coefficients for Missouri was completed. A study to develop volume/capacity ratios for signalized intersections was begun.

The Local Technical Assistance Program continued to link the sources of technology and the local agencies that can make use of it. This program with educational and training emphasis has been expanded to target the six metropolitan areas. Through workshop instruction, guidesheets, videos and quarterly newsletters, the program has encouraged field use of technology. The cities and counties have become more aware of the available program, and a positive relationship continues to develop.

Additional workshops have been made available to match the urban customers' needs. Communications with the rural transportation agencies have been enhanced by participating in district county commissioner meetings throughout the state.

The Finance Section projects income and expenditures, maintains historical data and prepares financial analysis for the department. During fiscal year '94, the section monitored the department's cash disbursement by division. Each division was furnished quarterly variance reports. Financial information is provided for cash management, legislative fiscal notes and various fiscal scenarios. Financial vehicle registration, fuel usage data and capital expenditures were provided to the Federal Highway Administration for inclusion in a national summary of highway statistics.

The Public Affairs Division keeps Missouri Highway and Transportation Department (MHTD) employees and the public informed about department activities.

Public interest in highway and transportation matters continued at a high level during fiscal year '94, and the Public Affairs Division responded by increasing the dissemination of information. To do this, the division used news releases, magazines, brochures, leaflets, fact sheets, videos, slide films, exhibits and displays, radio and television programs and public speaking engagements.

Public Affairs personnel keep in contact with the state's news media and routinely distribute information to the media.

During fiscal year 1994, the division prepared and distributed about 125 news releases. In addition, numerous special articles, feature stories and photographs were supplied to magazines, newspapers and other publications. The division contracts with an external statewide newspaper clipping service to keep officials informed of department coverage and comment. The division distributes copies of these clips to division and district offices.

The division often helped in the groundbreaking and formal opening ceremonies of major road and bridge projects. Division personnel developed speeches, brochures and the department's annual report.

The division monthly published and distributed the "Missouri Highway and Transportation News." The MHTD News is the department's employee newspaper with a circulation of more than 10,500.

Per month, the division answered approximately 1,000 mail and telephone requests about maps, road information, routings, educational material and films.

The division supervised the distribution of more than one million highway maps, many of which were given out at the Missouri State Fair. Public Affairs personnel helped staff the annual fair exhibit in the Highway Gardens, a roadside park on the fairgrounds.

The department's technical and video library also continued to be housed in the division.

The Right of Way Division acquires realty rights for the construction and improvement of state highways and related facilities. It provides a relocation assistance and payment program for people displaced by land acquisition. It also disposes right of way no longer needed for state highway purposes and assists the Chief Counsel's Office in preparing condemnation cases.

During fiscal year 1994, the cost of right of way acquired for highway construction totaled \$43,559,539.

The division acquired 1,278 parcels of land. This number includes 1,129 parcels acquired by negotiated settlement and 149 by condemnation, or 88 percent acquired by negotiation and 12 percent by condemnation.

Total payments of \$1,052,629 were made in fiscal year 1994 under the Relocation Assistance and Payment Program to help relocate displaced families and business and farm operations. During the fiscal year, 367 relocation claims were processed and paid.

During fiscal year 1994, the division obtained 710 appraisals. Each month an average of 59 appraisals were produced. The division's total appraisals also includes 455 damage statements prepared on parcels with an estimated value of \$2,500 or less.

The sale of improvements located on right of way acquired for highway construction and excess property totaled \$747,555 during fiscal year 1994. And rental of airspace, excess property and property acquired for future construction equaled \$508,788.

AVIATION

As an industry, aviation is a major contributor to the state's economy. As a transportation mode, it moves millions of Missourians each year. The Transportation Division's aviation section promotes these values through the development of industry, the improvement of airports and the education of local governments and individuals.

Aviation section personnel give information or technical advice to airport sponsors and others who are interested in the establishment, improvement or promotion of aeronautical facilities.

The aviation section provides financial assistance to cities, towns, counties or airport authorities in the state through three grant programs. The capital improvement grant program gives financial assistance for planning and construction or expansion to sponsors of publicly owned airports. Funds under this program are granted on a 80 percent state/20 percent local matching basis.

Under the airport maintenance program, funds may be granted to airport sponsors on a 80 percent state/20 percent local basis for maintenance on runways, taxiways and parking aprons. These programs are financed from the fuel tax applied to aviation gasoline and from general revenue appropriation.

The Federal Aviation Administration (FAA) has selected Missouri along with six other states to conduct a block grant demonstration program. Under this program, MHTD's aviation section will administer all federal airport improvement funds for general aviation, reliever airports and commercial service airports that enplane less than 10,000 passengers per year. The demonstration program extends through Sept. 30, 1996. The purpose of the program is for the states to administer the federal aid program for smaller airports for the FAA.

A portion of the fuel tax revenue is used for the annual publishing and distribution of the Missouri Aeronautical Chart and Airport Directory. The aviation section published 12,000 copies of the chart/directory at a cost of \$7,078.

As a result of the Airline Deregulation Act of 1978, the aviation section monitors the small community essential air service program that is regulated by the Department of Transportation. A requirement of the act is that all actions affecting the air service to smaller communities must be coordinated with state aviation agencies.

During fiscal year 1994, the section performed 114 airport inspections and 128 obstruction evaluations; two objections were filed.

Missouri has 473 airport facilities, which includes airports, heliports, seaplane bases and a stolport. Of these, 114 facilities are open to the public. There are 5,489 registered aircraft and 12,146 registered pilots in the state. Eight airports provide scheduled air transportation and enplaned more than 13 million passengers annually.

The aviation section received and processed 30 applications for financial assistance under the airport capital improvement, maintenance and block grant programs. The section expended \$367,101 on 24 capital improvement projects and \$691,689 on 20 maintenance projects. For

federal fiscal year 1994, the aviation section received \$8.6 million in federal money. The section expended \$9,460,589 on 41 grants that were in progress during fiscal year 1994.

Third State Economic Development projects were in progress at two Missouri airports during fiscal year 1994. A total of \$225,453 was expended for these projects.

In 1990, the aviation section began obtaining aircraft activity counts at selected airports. The activity counts provide more accurate data for the Missouri State Airport System Plan. The counts are obtained by placing acoustic monitors near runways four times a year. The four counts are then calculated for an annual operations number for each airport. During fiscal year 1994, counts were obtained at 24 airports.

The aviation section is involved with the American Association of State Highway and Transportation Officials (AASHTO) Standing Committee on Aviation, National Association of State Aviation Officials (NASAO) Executive Committee, NASAO Strategic Planning Group, St. Louis Regional Commerce and Growth Association Aviation Committee, St. Louis Airspace Users Advisory Committee, Missouri Highway and Transportation Commission's Aviation Advisory Committee and the Missouri Airport Managers Association.

RAILROADS

The railroad section provides, maintains and improves rail transportation within Missouri. The section administers rail planning programs, rail project implementation, the Amtrak 403(b) program and the highway-railroad grade crossing program.

In fiscal year 1994, the rail planning activities program carried out many different items including the following:

- *railroad data collection to be included in the next scheduled Rail Plan Update;

- *branch line abandonments;

- *the monitoring and implementation of federal rail legislation;

- *continuation/expansion of the Local Rail Freight Assistance program; and

- *other general railroad matters.

The rail project implementation program involved seven rail projects. They are as follows:

- *Columbia to Centralia — 21.4 miles; rehabilitation project in the amount of \$518,300, FY 1992 discretionary funds \$280,000 and FY 1993 Discretionary Funds \$238,300.

- *Gateway Western Railroad — LRFA Emergency 1993 Flood Funds for damages sustained in the Midwest floods for expenses incurred before Aug. 1, 1993; \$639,190.

- *Green Hills Rural Development — LRFA Emergency 1993 Flood Funds for damages sustained in the Midwest floods to the rail line between Chillicothe and Sumner, Mo.; rehabilitation project in the amount of \$1,118,300.

- *Gateway Western Railroad — LRFA Emergency 1993 Flood Funds

for damages sustained in the Midwest floods to the rail line at the Glasgow Missouri River bridge, the 2,030-foot gap near Glasgow and the slope restoration at Louisiana, Mo.; \$4,901,456.

*Missouri and Northern Arkansas Railroad — LRFA Emergency 1993 flood funds for damages sustained in the Midwest floods to the rail line at Butler, Mo.; rehabilitation project in the amount of \$168,773.

*Green Hills Rural Development — LRFA Emergency 1993 flood funds for damages sustained in the Midwest floods to the rail line between Chillicothe and Sumner, Mo.; rehabilitation project in the amount of \$263,000.

*Missouri and Northern Arkansas Railroad — LRFA fiscal year 1994 discretionary funds in the amount of \$383,627 for the rehabilitation of the Carthage to Joplin and Webb City to Atlas rail lines.

Missouri provides rail passenger service between St. Louis and Kansas City through the Amtrak 403(b) program. The "Ann Rutledge" and the "St. Louis/Kansas City Mules" trains are subsidized by a ratio of 65 percent state funding and 35 percent Amtrak funding. During fiscal year 1994, these two trains carried approximately 157,000 passengers. Midwest flooding during the summer of 1993 interrupted Amtrak service at different times.

Passenger station improvement activities included the replacement of some glass at the Kirkwood station.

The Transportation Division is the communication link between the MHTD and railroads for projects involving railroad-highway crossings.

Grade separation and at-grade crossings form the majority of projects administered by this division. Grade separation projects, such as highway bridges over railroads, involve personnel in the Chief Counsel's Office and several divisions including Planning, Right of Way, Bridge, Design and Construction. These divisions' efforts must be coordinated and communicated to the railroad to secure approval of plans and execution of agreements and easements. The Transportation Division is pursuing 29 projects improving or constructing highways over or under railroads.

The Transportation Division is also responsible for coordinating and administering a program to improve at-grade highway/rail crossings throughout the state. This fiscal year the state of Missouri will have the opportunity to obligate more than \$3.8 million of federal highway funds. These funds are matched by the State Grade Crossing Safety Fund and by the railroads. The funds pay for improving safety at or near highway/rail crossings. This funding aids the installation of flashing light signals with gates, state-of-the-art computer circuitry and high-type crossing surfaces if the crossing warrants.

TRANSIT

The transit section assists in the planning, developing and operating of the state's public transit and specialized paratransit systems. This function is carried out through the administration of state and federal programs relating to general public transportation and specific programs for the elderly and handicapped.

The Missouri Elderly and Handicapped Transportation Assistance Program provided state financial assistance for 178 nonprofit organizations offering transportation services to the elderly and handicapped at below-cost rates. For fiscal year 1994, program appropriations after withholdings were \$1,400,419.

The 10 area agencies on aging received \$756,227 in state funds to supplement federal funds for elderly transportation. An additional \$228,684 was available to 65 organizations working with older Missourians. State funds totaling \$415,508 were available to 113 sheltered workshops, group homes and other handicapped facilities to assist in transportation.

The department helped subsidize 4,046,748 special transportation trips. The total cost of these trips was \$11,701,063.

Thirty-one small urban and rural general public transit systems received financial and technical support from MHTD. Federal financial assistance is available under Section 18 of the Federal Transit Act, as amended, and allocated to the various systems by MHTD.

The 31 small urban and rural systems had a combined operating budget of \$8,101,000; \$2,405,287 was provided by the department.

The systems operated 343 vehicles, logged 8,066,000 miles and provided more than 2,232,000 trips.

Section 9 of the Federal Transit Act provides formula capital and operating assistance to transit systems in urban areas of more than 50,000 population. The department administers this program for Columbia, Springfield, St. Joseph and Joplin.

Capital assistance to nonprofit organizations and public entities giving transportation service to the elderly and persons with disabilities is provided by Section 16 of the Federal Transit Act. In fiscal 1994, the program provided \$1,279,592 in federal assistance. This was matched with \$299,899 in local funds to purchase 53 vehicles for 42 organizations, many of which were equipped with special equipment to insure compliance with the Americans with Disabilities Act of 1990.

There are 163 organizations operating 497 Section 16 vehicles statewide, providing more than 2,019,490 trips to eligible clients, while logging 6,735,256 miles.

The Americans With Disabilities Act of 1990 has had an effect on the workload of the transit staff. Increased responsibilities include reviewing and certifying, on behalf of the state to Federal Transit Administration (FTA), the implementation of Complementary Paratransit Service for fixed route providers and insuring full compliance of vehicles and facilities for all other agencies funded through this department.

Transit also administers the Rural Transportation Assistance Program — a training and technical assistance function funded by the FTA. Training courses offered include defensive driving, CPR and first aid, passenger assistance techniques and emergency procedures. Technical assistance is offered in the areas of vehicle procurement and maintenance. During the fiscal year 1994, there were 80 on-site driver training programs offered involving about 1,050 drivers.

The transit section has made statewide grant applications for national

discretionary financial assistance under Section 3 of the Federal Transit Act. The first application was approved for \$2,555,550 and the second application funded at \$785,000. These two grants funded the purchase of 133 vehicles. A third application was approved for \$5.1 million to assist in the construction of a transit park-n-ride facility. A fourth grant was approved for \$8 million and has funded the purchase of 199 vehicles. A fifth grant for \$1.5 million is awaiting federal approval.

The transit section has been funding the transit planning efforts of the Metropolitan Planning Organizations (MPO) in areas of more than 50,000. Recent changes in federal law now require the department to received federal Section 8 planning assistance and pass on these funds to the MPOs. Section 26(A)(2) of the Federal Transit Act may be used to fund special transit studies as well.

WATERWAYS

Waterways provides technical assistance to Missouri port authorities in promoting private capital investment, in increasing the volume of commerce and in establishing a free trade zone within their port districts. Every city or county situated upon a navigable waterway may form a port authority. Fifteen port authorities have been formed along the Missouri and Mississippi rivers. The department is frequently contacted by interested communities concerning the port authority program.

During fiscal year 1994, two capital improvement projects were completed at the Kansas City Port Authority. The value totaled \$950,000. Work continues statewide on five port capital improvement projects that were funded during 1989, 1991, 1992 and 1993.

In addition to providing technical assistance, funding was also provided to assist port authorities in the administration of their port development programs. During the year, \$286,137 in grants was expended by 13 port authorities. These funds are used by the recipients for managerial, engineering, legal, research, promotional, planning and other nonconstruction-related expenses.

PORT DEVELOPMENT ADMINISTRATIVE GRANTS

Howard/Cooper County Regional	\$ 25,000
Jefferson County	9,600
Kansas City	10,000
Lewis County-Canton	24,000
Marion County	20,400
Mississippi County	5,000
New Bourbon	45,937
New Madrid County	33,600
Pemiscot County	33,600
Southeast Missouri Regional	39,000
St. Joseph Regional	25,000
St. Louis City	10,000
St. Louis County	<u>5,000</u>
TOTAL	\$286,137

STATEMENT OF RECEIPTS AND DISBURSEMENTS FOR FISCAL YEAR 1994

Highway	Receipt	Disbursements
Basic Revenue:		
Motor Vehicle License	\$186,072,573.82	
Dept. of Economic Development	1,917,768.34	
Motor Vehicle Use Tax	35,361,225.75	
Drivers License Fees	12,790,494.09	
Motor Vehicle Inspection Fees	2,303,171.00	
Motor Fuel Tax Receipts	374,135,729.40	
Vehicle Sales Tax Receipts	<u>78,568,221.95</u>	
Sub-Total	691,149,184.35	
Other Revenue:		
Misc. Escrow Fees	6,326,734.77	
Reciprocity Fund Interest	90,381.12	
Road Fund Interest	2,461,396.45	
Other Miscellaneous	<u>29,243,262.55</u>	
Sub-Total	38,121,774.89	
Federal Reimbursement:	412,921,174.76	
Federal Highway Administration	<u>0.00</u>	
Corps of Engineers	412,921,174.76	
Sub-Total		
Construction		584,638,040.50
Maintenance		287,030,177.10
Administration		77,799,010.01
Refund of Motor Fuel Tax		30,240,899.61
Legal Expense Fund		253,209.24
Highway Revenue Generating Fund		3,650,000.00
O.A.S.I. (Highway)		13,502,878.35
Other State Departments O.A.S.I.		5,389,638.44
Other State Departments (From Hwy. Fund)		<u>130,164,675.46</u>
TOTAL FOR HIGHWAY	1,142,192,134.00	1,132,668,528.71
Transportation		
Administration		1,787,095.03
Transit		7,363,402.90
Rail		5,533,515.18
Aviation		9,546,888.07
Water		303,728.14
General Revenue Fund	3,435,572.75	
Federal Fund	21,729,746.00	
State Transportation Fund	812,470.03	
Aviation Trust Fund	<u>462,896.23</u>	
TOTAL FOR TRANSPORTATION	26,440,685.01	24,534,629.32
Third State Building Trust Fund	<u>1,250,283.34</u>	<u>1,250,283.34</u>
GRAND TOTALS	1,169,883,102.35	1,158,453,441.37



**OUR MISSION IS TO PROVIDE
A QUALITY TRANSPORTATION SYSTEM
THAT RESPONDS TO MISSOURIANS'
DEMANDS AND ENHANCES
THE STATE'S GROWTH AND PROSPERITY.**